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ABSTRACT

Twenty kindergarten children, identified as being at high risk for future learning disabilities (LD) were matched with a control group on the basis of age, sex, IQ, and cognitive scores and were provided with a highly structured sequential curriculum aimed at remediating deficits identified in the screening process. Among skills evaluated by the screening battery were picture memory, digit memory, sentence memory, letter naming, and intelligence. Also stressed in the experimental treatment were a warm emotional classroom climate, use of teacher strategies specifically for children with learning problems, continual evaluation and planning, and parent involvement. Unexpected findings included the identification of an equal number of girls and boys as potential academic risks, a high correlation between the Slingerland Test and the Primary Mental Abilities Test, and the apparent greater importance of auditory distraction than visual distraction in decreasing performance of LD children. Differences between experimental and control groups on posttests were not statistically significant but were higher for the experimental group in all but one case. It was planned that the achievement of the groups would be followed up through the primary grades. (The major portion of the document consists of appendixes which detail the screening instrument; list evaluation forms, task boxes, teacher made materials, and instructional materials; and provide the complete curriculum guide used in the program.) (DB)

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ESEA TITLE III

Early Intervention To Prevent Learning Problems

Project Report for 1971-72

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Carroll County Public Schools

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NARRATIVE PROJECT REPORT

Early Intervention To Prevent Learning Problems
ESEA - Title III

School Year 1971-72

Carroll County Public Schools

Dr. George Thomas
Superintendent of Schools

Dr. Edward Berkowitz
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FORWARD

This is a description of the Early Intervention to Prevent Learning Problems Project (1971-72) in Carroll County. This program was made possible through Title III of the Elementary and Secondary Education Act of 1965 (Public Law -89-10), Evaluation of the project is included.

This report is the result of the work done by the entire Title III staff including Mrs. Maryln Mitchell, secretary, Mrs. Karen Gyzberts, teacher aide, Mr. William Pearre, teacher, Mr. Duane Riddle, research associate, and Mrs. Jewell Makolin, Director of the project.

All questions or suggestions concerning this report should be directed to the Carroll County Board of Education, Early Intervention Project, Westminster, Md.

Appreciation

The Carroll County Board of Education is very grateful for the support, encouragement, and assistance of the State Department of Education, Division of Compensatory, Urban, and Supplementory Programs headed by Dr. Percy Williams, Assistant State Superintendent, Mrs. Frances Meginnis, Assistant Director, ESEA, Title III, inspired us with her belief in our project even before we wrote the proposal and since has helped us in many ways especially in assigning the ESEA staff to help us whenever we have needed it. We are especially grateful for the assistance of Mrs. Catherine Bruner with the curriculum development, Miss Adele Mitzel with research, and Mr. James McGowan with the financial aspects. Mr. Joseph Showell and Mrs. Phyllis Kopelke have also been helpful.

A federal program cannot operate without the support of the local educational agency. Principals and elementary supervisors have been very cooperative. Dr. George E. Thomas, Superintendent of Schools, who has done research on The Influence of Selected Family Background Factors on Reading Readiness, Reading Achievement, and Teacher's Rating of Pupils in Grade One, was very interested of this Title III research and remediation project. It would have been impossible to undertake such a project without the dedication to research and educational growth and development evidenced constantly by Dr. Thomas Mrs. Margaret Bailer, Director of Curriculum, Mrs. Dolores Snyder, Director of Pupil Services, and Mr. Paul Bowersox, Supervisor of Federal Programs. Mr. John Wooden, Direction of Instruction, who has since retired, was very helpful in initiating the program. Mr. David Humbert, School Psychologist worked closely with the project in the developmental stages and was of much assistance in developing the initial screening battery.

We are very appreciative to Dr. William Miller, Head of the Psychology Department of Western Maryland College for training and scheduling his senior psychology students to administer the WPPSI Intelligence Test to all children identified in the initial screening battery. He also trained his students in the Social Psychology class to make home visits to interview the parents of the sixty children considered for the control and experimental groups.

Dr. Irene Hanson, Professor in the School of Education, Towson State College, has served as a consultant for the first grade year. She also trained students from Towson State College in speech therapy to administer the Goldman Fristowe and the North Western Syntax Test. This enabled us to do fall pre and spring post testing on all kindergarten children in Westminster. Of special assistance was her accumulation of data on the language and speech areas which she interpreted to all the kindergarten teachers. It is felt that modifications were made in the kindergarten curriculum as a result of her suggestions.

The director feels that the combined intelligence of professionals directed to a common concern or goal has been a highlight of this project. Truly, "None of us is as smart as all of us".

The Carroll County Title III Staff

William Pearre - Teacher
Karen Gysberts - Teacher Aide
Marlyn Mitchell - Secretary
Jewell Makolin - Director

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I.

Overview of the Project

Many remedial programs exist in the public schools for children who have learning problems in the regular classroom. Remediation typically includes additional reading instruction or placement in a "special" program, i.e., learning disabilities or educationally handicapped. Unfortunately, children who are placed in these remedial programs have failed at some educational level (pre-school through high school) before any remediation evaluation is initiated.

Benjamin Bloom[1] indicates the importance of early childhood programs. His research has demonstrated that the typical child has attained approximately 50 per cent of his ultimate intellectual ability by the age of 4. Another 30 per cent increase in intellectual ability is believed to be attained between the ages of 4 and 8.

Dr. Jules C. Abrams[2] states:

> "When a child experiences difficulty in school, his life is complicated in a number of different ways. Constant failure and frustration may lead to strong feelings of inferiority which in turn intensify the initial learning deficiencies. Under the impact of continued failure, the child desperately attempts to defend himself against increasing environmental pressures as well as the growing, gnawing feeling that he is 'just plain stupid'. Burdened by the fear of further wounding to his won pride, the child may simply withdraw into his own fantasies or he may act out aggressively against his teachers or his fellow students. Now he is no longer merely a 'learning disability'; he has also become a behavior problem (often at home as well as in school)."

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1. Bloom, Benjamin, "Stability and Change in Human Characteristics," University of Chicago.

2. Abrams, Jules, C., The Reading Teacher, January, 1970.

Therefore, it appears necessary to intervene early in the educational experiences of the child and, when possible, in advance of kindergarten to maximize learning and eliminate failure. This project is designed to identify early in the kindergarten year children with deficits in language, cognitive skills, and in the auditory and perceptual modes. The general objective is to intervene early in the educational experiences of the child in order to remediate deficiencies in the basic modalities and to promote the acquisition of other cognitive skills which determine later success and failure patterns. This general objective will be implemented by the following specific objectives:

1. To survey the 1971-72 kindergarten population in Westminster to identify children with potential learning problems.
2. To develop a special kindergarten and first grade curriculum for the experimental group which plans for the developmental sequencing of cognitive skills and for achieving proficiency in the basic modalities.
3. To determine if we accurately predicted the academic success of each child.
4. To evaluate the predictive performance of each instrument used by comparing the academic progress of all the children when they are in second grade.
5. To determine if the experimental group who had the special sequential developmental curriculum succeeded significantly better in the basic skills than did the control group who were taught by the traditional curriculum.

To achieve these objectives the following steps were taken:

-Comprehensive screening of 1971-72 kindergarten children
-development of a special kindergarten curriculum
-training program for teacher and aide
-dissemination of information to kindergarten and first grade teachers
-development of teaching strategies effective with young learning disabled children
-an on-going process evaluation and a research design for product evaluation
-parent development program

Approximately 50 per cent of the students are served in the Carroll County Public Schools from a non-rural farm background. Another 30 per cent of the population can be described as "other urban", and the remaining 20 per cent would be described as rural farm. Socio-economic status would be considered middle income. Agriculture is the dominate economic force with some light industry.

II

Selection Procedure for Control & Experimental Groups

The entire kindergarten population received a screening evaluation early in September, 1971. The evaluations were completed by a teacher and an aide, trained in administration of these standardized instruments. To eliminate reactive effects and to assure maximum performance, two evaluators worked and played in the classroom with the children prior to the evaluation. The screening took approximately 4 weeks and was concluded by the second week in October.

The screening battery consisted of several subtests of the Stanford Binet Intelligence Scale, Janisky Letter Naming Test, language and comprehension section of the Denver Developmental, first six designs of the geometric designs subtest of the Wechsler Pre-School and Primary Scale of Intelligence, and teacher recommendation. The specific subtests taken from the Stanford Binet Intelligence Scale are as follows: picture memory (age 3, subtest 4), naming objects from memory(age 4, subtest 2), auditory memory (ages 2, 3, 7; subtest 2, alternate 6 respectively), and memory for sentences (age 4, alternate subtest).The scoring criteria were based on the norm of each respective test or subtest. For example, a student's score on the auditory memory subtest of the Stanford Binet Intelligence Scale was based on the 1960 norms appropriate for his age level. These tests provided an objective evaluation of each student's auditory memory skills, visual memory skills, and language comprehension skills. If a child was deficient in two or more areas, he was considered a <u>high risk</u> and participated in the second screening evaluation.

DeHirch and Janisky in their first study, Predicting Reading Failures, had tested children at the end of kindergarten. Their research was carefully evaluated to determine an instrument which could be used at the beginning of kindergarten. In a telephone call with Dr. Janisky (March, 1971) she discussed with the director the 5 most significant predictors in her second research study. These were letter naming, picture vocabulary, word matching, sentence memory, and Bender-Gestalt. Since then, her research has been published, but we had the benefit of early access to this information.

In addition we consulted Dr. Henry Marks of Johns Hopkins Hospital, Dr. Mark Ozer of Children's Hospital, Washington, D.C., and Reginia Cicci of University of Maryland, and Dr. Irene Hanson of Towson State College. Fortunately at this time, special education was operating a Workshop on Learning Disabilities, and ten outstanding authorities in the Maryland-Washington area were on the agenda. The project was discussed with each of these consultants.

Since very little research has been done in how to identify pre-school children with learning disabilities, we had to look carefully at research concerning older children who failed to learn. We needed an instrument which would measure the deficits in young children which corresponded to the same deficits found in older failing children. The works of Peter Hainesworth, Beth Slingerland, Samual Kirk, Elizabeth Koppitz, Merle Karnes, Doris Johnson, and Helmer Myklebust were of valuable assistance.

As we studied the available research to determine a screening battery, we had several other factors to consider:

1. We were developing a screening method which involved 2 stages. In the initial stage we wanted to over-predict. We did not want to miss any potential problems.

2. The initial screening battery had to be short and one that a para-professional could administer.
3. The vocabulary in the directions for the test tasks had to be carefully structured and limited in order to get an accurate measure of the child's performance.
4. The tasks had to be fun for the children and had to appear to be game playing.
5. The remediation project was geared to the learning modalities; therefore, our instrument had to measure these areas.
6. The instrument had to measure areas where older children who had learning problems were unsuccessful, but the tasks to measure this had to be on the level of the young child.

After much review of the available research in the fields of both special education and reading as well as discussion with consultants, we decided upon an initial screening battery consisting of:

1. Picture memory - measured the child's ability to name objects and his visual memory.
2. Digit memory - involved auditory perception, sequencing, and memory with verbal output.
3. Sentence memory - involved the same tasks as digit memory, but words were involved as opposed to numbers.
4. Letter naming - Dr. Janisky feels that most pre-school children have been exposed to letters of the alphabet, but her research was at the end of kindergarten. Therefore, we determined for our study that a child should know at least 1 letter. Not knowing any letters would not penalize a child, unless he had other deficits, because a total of two deficits were necessary for the child to be included in the second screening.

5. The language comprehension section of the Denver Developmental Test was used because it was a short section involving both receptive and expressive language. Since additional language screening was to be included in the second screening, we thought the Denver had merit for our purposes.

6. Dr. Janisky had found in her second study that the Bender was among the top five best predictors when the Koppitz scoring scale was used. We did not have access to anyone trained in the Bender who had time to evaluate 230 cases. The director was trained in evaluating the geometric designs of the WPPSI, so these were included to measure visual perceptual motor skills.

7. Emotional deviations while playing the games were noted by the tester, such as crying, extreme shyness, mobility, refusals, and other behaviors. This counted as a deficit to be included for consideration.

8. Teachers were asked to refer children about whom they were concerned at the end of the second week of kindergarten and again after 4 weeks. A teacher's referral counted as a deficit to be included in the total for the child.

From the initial screening 91 children were eliminated as low academic risks, thereby identifying 139 children as possible academic failures. These children were given the Neurological Developmental Observation by Dr. Mark Ozer, Director of Learning Disability Clinic, Children's Hospital, Washington, D. C. This instrument is a measure of gross motor skills, fine motor skills, and motoric responses to

auditory stimuli, visual stimuli, and kinesthetic stimuli. The critical cutting points for each of the stimuli was auditory 24, visual 19, and kinesthetic 15. This test incorporates many features of the Roach and Kephart Purdue Perceptual Motor Survey. Norms were developed in each modality based on the population tested. Dr. Ozer personally evaluated each profile to determine the children he thought were low and high risk cases.

In addition to the Neurological Developmental Observation, the children in the second screening received the Wechsler Pre-School and Primary Scale of Intelligence. This instrument served as a measure of intelligence and as a criterion for participation in the program. If a child's I.Q. was less than 70, he was excluded from the program. If a child had only one learning deficit area, he was not considered eligible for the program. The wide range of I.Q.'s in the program allows the researcher to study stability and predictability of an I.Q. relative to outcome (academic standing one year later, three years later). The second screening eliminated 45 children as being low risk, 2 children who were repeating kindergarten, and 4 who scored below 70 in I.Q., leaving a total of 88 children as possible candidates for the program.

Those remaining children were grouped for matching purposes according to those who were chronologically younger than 5-2, chronologically 5-2 and older, and each category was further grouped according to I.Q., - below 90, 90-100 and 100-110. From these 88 children, 20 matched pairs were obtained according to the above criterion and sex. The value for each of the categories was equal, and each pair was considered to be a high educational risk. That is, each student had demonstrated deficit skills in two or more areas of language comprehension and/or learning modalities (auditory, visual,

and kinesthetic).

These 40 children plus 16 alternates were administered the Adaptive Binet. This form of the Binet includes the subtests of the Stanford Binet Intelligence Scale for ages 2 through 6, and the first subtest of age 7, but groups them according to content area for administration purposes. For example, a child would receive all auditory memory subtests in order of difficulty, then all subtests of a second content area. Seven additional batteries were administered because of the additional language information provided on each subtest which measured behavior in line with the instructional procedures and curriculum development of this project. Some alterations in matching were necessary after the administration of the Adaptive Binet.

During the first week of November, all of the kindergarten children classes were administered the Goldman-Fristoe Articulation Test and Northwestern Syntax. All tests were intended for the initial screening, but schedule problems did not allow administration at that time. The Northwestern measured both expressive and receptive modes of syntactical language skills, The Goldman-Fristoe is a measure of articulation error.

An information sheet was sent to the parents to elicit other information which could be helpful in the selection process. Very little information of value was gained to assist in the decision-making process determining the selection of the control and experimental groups.

The control and experimental groups were matched according to age, sex, I.Q., and their cognitive scores. Only two parents of the original 20 proposed experimental children failed to give consent for participation in the class. Fortunately, the alternate control children for those two children were moved from the control position to the experimental position.

Discussion of the Initial Screening Battery

The initial screening battery was not intended to be a complete screening instrument. It was a means of surveying the kindergarten group to determine the children who needed additional assessments. Since it does not measure intelligence, the initial battery does not discriminate children who have low ability from those who have learning disabilities. In our project we had money to administer individual intelligence tests. In the four early intervention classes financed from local funds for this year, this was not possible. Instead, we used local norms on the Ravens Matrices for a performance I.Q. and the vocabulary subtest of the WPPSI. No I.Q. score was recorded on the child's record, but the two scores helped to further screen the children to determine which ones should have a complete intellectual assessment. If you are screening less than 100 children in order to form a special kindergarten class, the initial screening battery, Ravens Matrix, and the vocabulary subtest on the WPPSI plus the teacher's recommendation would probably be sufficient to identify the children for the program. If you are screening a group larger than 100, you need a battery which would indicate more specifically the children who most fit the program design. In one of the special kindergarten centers, we used the Meeting Street Test as an initial screening instrument. We were still faced with the problem of measuring intelligence. A beginning kindergarten child cannot take a pencil and paper group intelligence test, and we couldn't afford individual tests. If one has sufficient space in the special kindergarten for placing all suspect cases, I.Q. is not a problem, and if one does not need to separate children with learning disabilities from those who are educably mentally retarded, the I.Q. score is not necessary.

However, rules governing state funding for special education often necessitate labeling children. For our purposes we again used the Ravens Matrices and the vocabulary subtest on the WPPSI with the Meeting Street Test. On one group of children we used both our initial screening battery and the Meeting Street Test. In two years we will compare the actual progress of each child with the predictions of both instruments. Predicting success at the end of kindergarten would seem to be a much easier task than at the beginning of kindergarten. However, if we wait until the end of kindergarten, we have wasted a year when we could have been remediating the child. Our Title III prediction instrument when evaluated at the end of the first grade in terms of the actual academic progress of the 232 children may provide guidelines for identifying children in the beginning of kindergarten. Although federal funding for this project ends when the children complete the first semester of second grade, the director plans to evaluate the academic progress of all 232 children at the end of the third and fourth grade and compare the kindergarten predictions with this.

It was thought that the advantages of the cognitive and language oriented kindergarten curriculum may become increasingly apparent as the children reach third and fourth grades because of the following: (1)the higher order of cognitive thinking required in math, science, and social studies, (2) after grade 2 the increasing amount of inner language required to comprehend what is read, (3)the accumulative deficit acquired by borderline high risk cases by grade 3 who have not been remediated in the early grades, and (4) the negative effect over the first three grades on the affective and social domain of children whose self-concept is lowered by borderline or low achievement.

Discussion on the Problems of Matching Kindergarten Children

Finding Kindergarten children who matched on cognitive scores was a very difficult task. It was impossible to also match them on a socio-economic-cultural-emotional basis. We would have had few, if any, matches had we used these factors as a criterion. If the socio-economic-cultural-emotional factors had been taken into consideration, we would have had to have a much larger population than 232 students in order to make matches. The time necessary for home visits to assess these factors would have prevented our program from beginning before February 1. However, predicting success on the basis of cognitive scores alone seems to be impossible because of the many factors which influence the cognitive functioning of the child. The question also arises as how do you measure the socio-cultural-emotional level of the home and especially the emotional level.

Discussion of how we have seen the development of the child hindered or enhanced by these factors follows. We had two little girls who matched almost exactly on a cognitive basis, but one did much better than the other at the end of the kindergarten. During the school year, we became aware of the deprived emotional situation of the little girl. Although the economic level was not deprived, the cultural, social, and emotional environment was. Her cognitive match came from a middle class home which offered many cultural advantages. The stepfather is a teacher, and the home is now very stable emotionally. Although the two girls matched cognitively in the beginning as far as test scores were concerned, the children were really not matched because of the cultural level and the emotional problems in the home.

Another example of how emotional conflicts will retard the learning process in a child was a little girl whose mother had left her and her two sisters approximately nine months earlier with the grandmother. The little girl was beginning to make some kind of adjustment to the situation when she entered kindergarten. Approximately three weeks after she entered our program, the mother returned unmarried but living with another man and a new baby. She demanded visitation rights, and these rights were granted, allowing the child to be in the mother's home over the weekend. This was such an emotional upheaval for her that many months were lost before she could begin to develop cognitively.

An example of the physical condition of the child influencing learning is that although we screened the children for both vision and hearing, three of the children have visual problems which were not diagnosed except by an optometrist skilled in the area of learning disabilities. Special exercises are being provided for the children.

All of these factors tended to influence school achievement as much as, if not more than, the cognitive ability of the child.

The normal developmental stages taking place in a kindergarten child and the intense adjustment required as he leaves home are factors which influence how a child is able to use his cognitive ability. The intensity of growth and development during the years from 5 to 8 makes it difficult to predict success or failure at the beginning of kindergarten. However, if you do not begin a special remediation program until the end of kindergarten, you have lost a year of prime time for remediation. Bloom's research that 80 per cent of the intelligence is developed by age 8 would indicate that if we did not intervene until the child is in the first grade or 6 years old, we would have lost three-fourths of that prime time. Assessing at the beginning of kinder-

garten gives you another year in which to remediate the child before he gets to the formal learning of the first grade.

Children younger than 4-9 were also very difficult to match because there was no way of knowing whether the deficit reflected was a lack of maturity or a learning problem. It could have been either or both. Our instruments did not predict more young (4-9 or 5-2) high risk cases than old (5-2 or older) high risk cases, but many of the young high risk cases, not in either the control or the experimental groups, tended to make much progress during the kindergarten year, according to teacher evaluation. A study of post-test results on the initial screening battery may bear this out, but this has not been completed at this time.

Several high educable children were included in both the control and the experimental groups. We decided to do this because we wanted to see whether we could raise the I.Q. of these children by our cognitively oriented program. We knew that Samuel Kirk in 1958 had done extensive research into the area of raising the I.Q. of educable preschool children. His research concluded that the greater the difference between the home environment and the school environment, the greater the change in the I.Q. In other words, if the home situation was a low socio-economic-cultural one, and the child was moved to an enriched environment, larger gains were made in I.Q. However, the children coming from a middle socio-economic level made fewer gains. There had to be a contrast between the two if I.Q. was going to be raised.

In our program, the children selected from the educable range were borderline cases. We did not feel that I.Q. scores of the young children are so accurate that they can discriminate borderline educable/SLD children so we accepted some from this category. This may influence

our research, and we will have to take a look at this at the end of the project.

~~Iith~~.

Overview of Treatment Aspect

The main aspects of the treatment for the experimental group included:

1. A sequential, structured, cognitively-oriented curriculum aimed at remediating deficits identified in the screening process. This included a hierarchy of skills for each area of emphasis developed through a careful task analysis.
2. An emotional climate in the classroom which was warm, accepting, and caring. Learning was made enjoyable. The structured task analysis promoted success.
3. Teaching strategies designed to meet the needs of children with learning problems. In many cases these deviated considerably from teaching strategies used with normal children.
4. Evaluation as a continuous on-going process. Daily evaluation and planning allowed modification of plans and teaching approaches.
5. Creative use of staff to maximize learning for the children.
6. Parent involvement

IV.

Curriculum of Experimental Group

The curriculum used on the experimental group was highly structured, sequentially developed, cognitively oriented, and designed to remediate learning disabilities. Specialized subject matter was ordered into sequential steps according to a task analysis. Therefore, any of the materials presented to the children had been analyzed and ordered in terms of least difficult to most difficult. A complete curriculum guide is included in the appendix, but the following is a brief summary.

The content areas emphasized in the experimental treatment were: gross motor skills, fine motor skills, visual discrimination skills, tactile perception, formation of sensory images, classification skills, memory skills, language development, spatial and location skills, critical thinking and problem solving, auditory discrimination, and math skills including geometric skills and measurement skills.

In addition to ordering of each content area, sub-level goals were determined as well as terminal goals. For example, a terminal objective could be verbal identification of all the letters presented auditorially. A sub-level goal could be the identification and location of all auditory sounds presented in a particular learning activity, such as hand clap, dog bark, etc. The minimum acceptable level of criterion performance of all learning tasks was approximately 80 per cent. Successful completion of a task without failure was the single most important component of the treatment program. If failure occurred, the teacher was responsible for the further breaking down of a task, so that success was possible.

In any treatment program, it is necessary to specify the experiment and the experimental procedure. Therefore, a rather detailed explanation of the curriculum and activities of personnel is provided.

Academic activities and the materials used will be discussed in each of the content areas.

The area of language involved two areas of concentration - formal and informal language. The formal language included the use of the Distar program. Each child had a daily Distar session with the aide. However, the Distar language does not include manipulative materials. Therefore, manipulative experiences were designed to supplement the Distar program. For example, in the gross motor activities the Distar prepositional vocabulary was used which stresses such concepts as, over, under, above,and beneath. The Distar vocabulary was incorporated into a Simon Says routine. Parents were provided a list of vocabulary used in the Distar program to provide additional reinforcement of the day's activities. Language development was constantly tended to by the staff, and opportunities were planned, as well as seized upon, to promote verbal interaction between the children and their peers, aides, parents, and teachers, Directions for promoting language development were placed on the Boxes to indicate the type of verbal interaction that should take place to encourage verbalization of the concept taught in the manipulation of the Box task. (A detailed description of the Boxes is provided in the Other Curriculum Operations of the treatment section of this paper.) Language was the vehicle that wove all of the curriculum program together. Karnes reports in her research that when manipulative experiences are combined with language experiences, maximum growth is realized in both the cognitive and the language areas. The Perceptual Learning Puzzles and the Language Lotto Games by Gotkin were also used in the informal language section.

In the gross motor area the student was required to differentiate

the parts of the body as a form of motoric activity relative to objects in relation to his body. A simplistic task included throwing a ball to a designated point. More complex tasks required finding the number of objects that would fit in some given object, for example, a large box or a water glass. The gross motor skills were taught through the MGL program by Marianne Frostig and from such games as Simon Says and the Block with Wooden Cylinder and the Pink Tower by Montessori.

Fine motor skills were taught by activities which included finger-plays to music, finger-painting, using a pencil, cutting, pasting, and easel painting. All of the motoric activities were accomplished through a wide range of media. Each child had a daily free play or creative play period which provided motor experiences and opportunity for affective skills development.

The critical thinking and problem-solving area exposed the children to a variety of stimuli. Science, as an area of critical thinking, included identifying a metal object from a group of objects. Problem solving required that a student identify unusual visual stimuli in a specific picture. The consequences of actions, involving both critical thinking and problem solving, required the student to determine the necessary steps required to perform a task. For example, in order to come to school, it is necessary to put on clothes, brush teeth, and eat breakfast. The materials used in this area included The Beginning of Training in Some Prerequisites for Beginning Reading by Beth Slingerland and the Developmental Learning materials. Most of the materials used in implementing this area of the curriculum, as well as other areas of the curriculum, were teacher-made.

The auditory content area required discrimination of various auditory stimuli. The children were required to isolate, locate, and identify hand claps, another child's voice, and train whistle, in the immediate environment without visual clues. In addition, children clapped out rhythmic patterns for various auditory stimuli. Many auditory activities required the following of directions from varied auditory stimuli. Other cognitive areas were reinforced by asking the child to specify size, color, shape, location, and description of various objects and media. The materials used in this area were basically teacher-made but did include Sounds All Around Us by Joanne Stanchfield, Auditory Discrimination In-depth, New York Times, and instructor prepared tapes.

The geometric skills content areas required the identification of various shapes. In addition to the identification of an object by shape, other identifying stimuli, such as color, size, and depth, were used. Specific materials used included the teacher-made materials and activities and the Attribute Blocks.

The measurement skills required the quantification of objects and the recording of time to complete the task. Children were required to determine how many footsteps, chair widths, and hand widths it was to a specific object - bookcase, wall, door, etc. Time was measured by requiring a child to place objects, such as marbles, blocks, and beads, in a container for the duration of another child's activity. This particular skill was teacher initiated and provided the opportunity for the reinforcement of skills in many areas.

The math skills stressed quantification, counting, using a large range of media. This included traditional counting, counting objects by number, and counting the number of like objects. Materials used

included Stratton-Stern Structural Arithmetic Kindergarten, Houghton-Mifflin, and Discovering How to Learn by Herbert Sprigle.

In the visual perceptual area the child was required to differentiate various alterations, locations, and variations of stimuli. The child was required to match the sample with distracting stimuli, identify stimuli regardless of size, and identify controlling stimuli from various rotated or inverted stimuli. Materials used include Find a Pair of Cards by Teaching Resources, geometric shapes and associations by Ruth Cheves, visual perceptual games, part I, and perceptual card Dominoes by Erie.

The integration of content and behavior was continual in the experimental program. The treatment was designed to reinforce behaviors in as many content areas as possible. The high frequency of reinforcing responses was attained by small group activities and individualized instruction. The individuals in the group were continually changed in order to meet individual needs.

A description of the routine day is provided which identifies the activities, signifies the length of the activities, and specifies the order of the activities.

8:45 to 9:15 a.m. The children arrive at varying times during this interval. The aide has one group for the Distar language program, and the remainder of the children engage in free play or creative activities. The volunteer aides and the teacher circulate among the children and interact with them.

9:15 to 9:30 a.m. The children participate in large group activities, such as calendar, salute to the Flag, and social studies activities. If a field trip is being planned, this is discussed. At the conclusion a sentence is put on the blackboard each morning to summarize the short discussion and to familiarize them with the use and function of written words as a substitute for the spoken language.

9:30 to 9:50 a.m. This is the first small group instructional period of the morning. The children are sent to one of the four designated areas. They are:

1. Distar language with the aide.
2. Perception and cognition skills with the teacher.
3. Boxes or other directed activities.
4. Free play or creative play.

The perception and cognition section provided instruction in one of the content areas. The

content areas were named and discussed earlier in the paper. Since large deficits appeared in most of the language and non-language areas, one cognitive content area at a time was assigned for a period of approximately one month. The activities associated with the Boxes were assigned to reinforce what was being taught in either the cognitive or language areas. The creative play activity provided the opportunity to improve fine motor activities.

9:50 to 10:10 a.m. The children switched to another section for instructional purposes.

10:10 to 10:30 a.m. Snack break and music

After the children had two small group activities at 10:10 a.m., they came back to a large group and had a snack break and music. In order to facilitate the moving for the washing of hands before the snack, activities continued in the room while individual children left to attend to their basic health needs. When one girl would return, she would tap another girl who would then go to the bathroom on her own without supervision. A boy would tap another boy, so he could leave. If children are to be expected to act independently, they must have opportunities during the day when they are unsupervised and can tend to their basic needs. It is the feeling of the staff that one reason why older children misbehave in the bathroom is because they have been

constantly supervised in this activity during the early grades.

10:30 to 10:50 a.m. At approximately 10:30 a.m., the children were sent to their remaining instructional section which concluded at 10:50 a.m. Each child, then, at some time in the morning was scheduled for a formal language program with the aide, a perceptual or cognitive session with the teacher, a reinforcing activity either on the Boxes or some other activity, and a free play or creative activity.

10:50 to 11:15 a.m. From approximately 10:50 a.m. until the first children began to leave at 11:15 a.m., gross motor activities were provided for the children who needed them. In the beginning, most of the children participated in the gross motor activities, but later only as needed. The aide directed this activity and used the MGL program of the Frostig material. The day ended with a discussion period and storytime.

IV.

Curriculum of Control Group

The control group was exposed to a less structured classroom situation. The curriculum for the kindergartens in Carroll County was being developed at the same time the Title III curriculum was developed, although each worked separately. Regular kindergarten was included as part of the school program just one year before our Title III Kindergarten Program began. The curriculum in the control group was similar to the experimental group in that it covered the following areas: social living, language arts, mathematics, science, health and safety, art and music, and physical and motor skills. Language was especially stressed. A quote from the curriculum guide explains this:

> "The development of language skills is of prime importance in the kindergarten program. The teacher should cut across subject matter areas in providing many rich experiences which afford broad opportunities for the development of language skills, rather than teaching the various areas of the language arts as isolated compartmentalized study. All activities in the program should center around language development."

The following are examples of the control curriculum:

Language arts objectives:

1. To listen attentively with understanding.
2. To speak with growing maturity.
3. To learn introductory reading skills, such as recognizing his own name, matching pictures of objects, recognizing likenesses and differences in letters, recognizing some letters in word form, recalling and repeating his own short story as recorded by the teacher.
4. To use simple written symbols, including printing his own name, copying a title for his picture which has been

dictated to the teacher, engaging in self-initiated practice with circles and lines as a basis for formal handwriting.

Mathematics area of the curriculum

1. Building on the concept of numeration.
2. Becoming familiar with size, shape, and pattern.
3. Learning about measures.
4. Learning about comparative relationships in the areas of time, quantity, and position.

Although the control curriculum was very similar to the curriculum of the experimental group, there were some significant differences:

1. Task analysis - The curriculum of the control group was not nearly as task-analyzed as the experimental curriculum. The hierarchy of skills was not as minutely sequenced.
2. The experimental curriculum was aimed at remediating deficits accumulated prior to the five-year level.
3. The organization of the class and the teaching strategies differed greatly. The regular kindergarten strategy was to present learning material in an integrated and defused approach with no discrete separation of cognitive areas.

A quotation from the curriculum guide for the control group exemplifies this:

> "The content of the kindergarten program evolves from the daily experiences of the children. These activities are not incidental in nature, but are selected by the teacher in light of the particular skills and attitudes that need to be developed. This is not to say that there is no incidental learning, but the teacher does not rely on it. Kindergarten children learn by observing, handling, using, thinking, and becoming actively involved in the activities. Teachers should keep in mind that learnings are not scheduled in separate subject areas, but each activity may include skills, attitudes, and concepts from many areas."

W.

Emotional Climate in the Classroom

We believed that including intellectual content and cognitive processes in a pre-school program does not preclude the attainment of other goals. We had contended from the inception of our project that social skills and affective development would improve as a result of improved cognitive functioning. An increase in language and communication skills is usually accompanied by a decrease in anti-social and emotional problems. We believed that success would improve self-concept, and that improved self-concept would lead to better emotional adjustment and better peer and adult relationships. If a child feels good about himself, he is more apt to get along with his peers.

We found that the children liked the structure of the curriculum and that they seemed better organized personally because of this. Learning disability children tend to be disorganized and disoriented. Organizational habits were fostered, such as having their own place for their belongings and responding in an orderly fashion to directions. It is believed that the structure helps the learning disabled child to more readily discriminate what is required to obtain success or complete a task. When he develops intellectual skills to cope with his environment, his social skills begin to develop. If a child is unable to make sense out of his environment, he is less apt to develop adequate social skills.

The classroom climate was one of acceptance and concern, but the teachers were very careful to foster independence in the children and to teach them the skills needed for self-sufficiency. Although formal instruction was given, the format was a play situation, so that

the children really felt that they were playing games when they were actually involved in a learning situation. [illegible] and daily schedule were structured, the atmosphere was relaxed and free of threat. The tasks of the curriculum were so sequential and gradual that success was almost insured. When failure did occur, the responsibility for modification was on the staff rather than the child. A classroom operated according to the maximizing of success and minimizing of punishment promotes personal acceptance and personal independence. If a child has succeeded on the previous task, there is a higher probability that he will approach a second task. Since risk-taking is necessary for optimal functioning in a highly complex environment, it is important that it be predicated on success.

Another very important feature that helped set the emotional climate for the program was the use of behavior modification techniques. Reinforcements were social rather than M & M's or tokens. Smiles, praise, pats on the back, spaghetti handshakes, and similar means of approval were used to reward the children for appropriate behavior. Since most kindergarten children desire to please, social reinforcers were effective. We sincerely attempted to ignore undesirable behavior and praise good behavior. When a child was not attending, the children who were attending were praised. It was found that this usually brought about the desired behavior. Then, the offender was praised for attending. It was the philosophy of the staff that some undesirable behavior could not be ignored. When criticism was given, it was given without any threat of rejection. The emphasis was on the positive behavior.

During the parents' meetings on Sunday afternoon, the theory

of behavior modification was explained to the parents. Parents were encouraged to use this method at home. The school psychologist was available at these meetings to interact in a very personal way with the parents and to assist in the appropriate use of the principles discussed at each meeting.

VI.

Teaching Strategies

In the immediate future, the important question in early childhood education may be how to teach preschool children rather than the current why, when, and what questions. As far as handicapped children are concerned, the why, when, and what questions have been answered by researchers, such as Merle Karnes and Samuel Kirk. The works of Jerome Bruner and Benjamin Bloom have established the why of early childhood education. Lavatelli, Weikert, Karnes, Deutsch, and others have determined the "what" or models of a cognitively ordered pre-first-grade curriculum. The "how" or the teaching strategies is an unsettled issue in early childhood education but one which this project directly concerns itself.

An early childhood project experiment is hardly a unique idea. There are many programs for culturally different or disadvantaged children, but there are few pre-school projects for children with learning disabilities. Several of the children had some cultural deprivation in addition to their learning disability, but the primary handicapping condition was learning disabilities. Elizabeth Koppitz in her book, Children with Learning Disabilities, citing her follow-up research on learning disability cases, recommends early identification and remediation as possibly the only way to satisfactorily remediate children with learning problems. The teaching strategies described in this section are an attempt to find methods for working with the pre-school learning disabled child.

Although the curriculum was highly structured, the teaching methods were very flexible and varied. The classroom was physically well organized and orderly, and visual stimuli were carefully controlled. Auditory stimuli were also controlled including teacher's voice. Every effort

was made to make learning fun and rewarding. One of the most important teaching strategies was dividing the children into small groups for instruction and then frequent regrouping according to need. For example, the staff believes that success is more likely in a group when children are placed in the group according to level of functioning. For instance, all the children who participated in problem-solving probably would not be the same intact group that participated in language instruction. By the use of very small groups, 3 or 4 children, and constant evaluation of the grouping of children, it was possible to individualize the instruction through small group activities and to have more time for needed individualized instruction. The staff concentrated on this approach because of its applicability to the regular classroom and their desire to demonstrate that individual differences can be met with this kind of grouping. We believe that strictly individualized instruction, although philosophically a very worthwhile ideal, is not practical in terms of teaching large numbers of children in one class. Even with the aides in this project, it was impossible to run a separate program for each of the 18 children, nor was it necessary.

Skills were taught to small groups of children and re-taught with sufficient practice periods until an adequate level of proficiency was attained by the children. There was much repetition, but the methods of presentation were varied.

The daily evaluation of the program and individual student success led to daily modification of teaching strategies, including:

a. Analyzing and breaking the task down to even smaller segments so that the child could have success.

b. Varying the method of presentation of the material so that the child might become successful.

c. Intensifying the duration of the presentation.

d. Blocking out competing stimuli. Most of our children were very distractible. They had difficulty selecting and screening the stimuli to which they should respond. Some were auditorially distracted, some were visually distracted, and some were both. An example of a way of blocking out competing stimuli would be how the Distar was used. Distar requires an attention span of 20 to 25 minutes, and our children had very short attention spans. Therefore, Distar was taught in a visually sterile, screened off corner in order to block out all visual stimuli. Earphones were put on the children to focus their attention just on the lesson. After about a month, the earphones were removed but visual stimuli was kept blocked.

Development of focusing methods to help the child focus upon the task. Carrels were used for the visually distracted to facilitate focusing. Earphones were used, and tapes were made for specific children who had difficulty focusing auditorially. The teacher constantly taught focusing methods and techniques to the children, so they could learn to compensate for their problems.

Each child had two instructional segments per day. Cognition and perception were taught by the teacher and language by the aide. These short instructional periods were followed by reinforcing activities. When the child left the perception and cognition segment, he would then have reinforcing activities with the aides. This usually involved manipulative experiences with the task boxes, games which

reinforced the content of the curriculum, or taped learning activities. The number and type of experiences depended upon the difficuly of the task and the ability of the child to perform the task. Constant evaluation was essential to determine the functioning level of the child in terms of the goals of the curriculum and the goals for the individual child.

Manipulative experiences were considered to be very beneficial when they were combined with verbal expression. Pictures were introduced in place of objects as the child grew and became secure in the manipulative area.

Some Bereiter Engelman strategies were used. The rule of spending no more than 30 seconds with an individual in a group teaching situation was followed in order that the other children would maintain attention. Unison responses were used to keep everyone attending. If the individual could not learn a task or concept within the group situation, the child was scheduled for some individual help later.

Aides and teachers were instructed to guard against over-verbalization and to keep short, simple explanations. Young, learning disabled children are confused by too many words. They lack language skills and have a very limited vocabulary, so over-verbalization defeats the learning process.

The student was provided immediate feedback, concerning the correctness or incorrectness of his response. When wrong, he was told quietly and in a non-threatening way. The right answer was immediately supplied for him. The staff was particularly careful to present tasks in a manner so that the child was absolutely sure of the behavior required to complete the task. This helped prevent

unlearning and reteaching which must occur when a concept has been learned incorrectly.

Modality teaching was emphasized. At times modalities were integrated for a teaching situation. At other times one modality was blocked to avoid overloading and to keep the input or output in just two modalities.

The children were read to as a group, and stories were taped for the children to follow. An appreciation and enjoyment of books was fostered in this way.

Learning stations were developed to reinforce concepts. Teacher-made games were also used for the same purpose, such as a modified concentration game for visual memory, and a hopscotch game for visual discrimination and gross motor skills.

An important reinforcement activity for the entire curriculum were the task boxes. The Boxes were used in most of the operations and were useful as reinforcing activities in the cognitive content areas. Due to their versatility of function, a very careful description of the Boxes is given.

Approximately 3 children worked on the Boxes during any given work period, and all children worked on the Boxes at least three times per week. Each child had a card programmed specifically for him, containing from 3 to 5 Boxes that he would do during the work time. The child matched a symbol on the card to the symbols on the ends of the Boxes. He then pulled the Box from the shelf, ran the language master card through the language master to receive instructions and then emptied the contents on a small work board which defined his working space. The child was encouraged to verbalize the concept within the Box by talking with the parent aide as he or she rotated

from child to child. The Boxes provided manipulative motor sensory activities which aided in the development and reinforcement of language and cognitive skills. Verbalization in conjuction with productive manipulative experiences required the child to make appropriate and increasingly complex verbalizations. Any difficulty that the child had was carefully noted on the prescription card which was prepared by the teacher to meet the needs of each child.

Modality instruction came into use quite frequently on the Boxes. If a child had difficulty performing after he listened to a card, he was given the suggestion to listen to the instruction card again. If a child had difficulty, the aide demonstrated visually the task being requested. In some instances, the child had to be taken by the hand and actually moved through the experiences before he could successfully complete the task. Occasionally, the level of difficulty from one Box to the next Box was too great. Therefore, the tasks had to be broken down and another Box inserted that would insure success and complete understanding of the concept.

Each of the sections of the cognitively oriented curriculum was reinforced in a specially coded section of Boxes, using numbered circles, squares, and triangles as coding devices on the ends of the Boxes. The Boxes were numbered in order according to their level of difficulty.

In each Box, in addition to manipulative objects, were language master cards with directions taped so that the child would know exactly what he was to do with the contents.

On top of all Boxes was typed directions for the parent aides. These directions included directions which were taped on the card

and any additional concepts that the parent should stress while working with the child and gave specific questions to ask in sequence.

Other projects, such as Baltimore City's Model Early Childhood Program, have used the Boxes concept. Our use was somewhat different in that the Boxes were reinforcing activities for the curriculum concepts being taught or to review concepts previously taught.

VII.

Creative Use of Staff to Maximize Learning

The personnel in the program included the teacher, a paid teacher's aide, student volunteer aides, parent volunteer aides, and the coordinating director. The duties of each of the professionals and para-professionals are described in the following paragraphs.

The coordinating director was instrumental in reviewing the research, directing the screening processes, selecting the children, designing and administering the program. The director worked carefully with the staff in the evaluation process.

The teacher was responsible for the total operation of the classroom. With the aide, he planned the schedule and the learning activities for each day. At the beginning of the day, he familiarized each member of the staff with the daily schedule and assigned responsibility to staff members. In addition to his leadership and direction of the teaching operation, he was responsible for small group instruction in the cognitive and content areas, as well as leading the large group activities. He determined entry behaviors for each child in the program in all the content areas. This was necessary to insure student success which was facilitated by the sequential nature of the curriculum. After initial learning levels were attained, the teacher moved to the next critical point. This required the daily charting of behavior and evaluation of the student's progress. Since the teacher had actually written the curriculum guide, he was most able to make modification, additions, and deletions when required to facilitate learning for individual

children. The teacher could be viewed as a perscriptive engineer.

A very important aspect was the use of the teacher's aide in the project. She participated in the daily evaluation and in the preparation of the lesson plans for the following day. Therefore, she understood the entire curriculum and the reasons why modifications were being made. This allowed her to become very goal-oriented. In addition, she was assigned the responsibility of teaching the formal Distar language program. In addition to these teaching segments in the language area, she also taught gross motor skills and performed other duties designated by the teacher. This use of the aide was somewhat different from the usual use of the para-professionals, but it made it possible for two teaching situations to occur at the same time.

Volunteer aides were a very important part of the program. During the second semester, two high school academic seniors assisted in the program in lieu of formal classes in the afternoon. A tenth grade educable girl from the Work Study program also was of invaluable help. Their service was of value to the project, and the student aides themselves gained from the experience. They engaged in structional and reinforcing activities relative to the individual lesson plan for each child. Some of the areas where the aides worked were with the Boxes (which were explained earlier), in the free play area, and in the creative area.

Parents were also used to work with children to carry out

individual prescriptions. Training was given to the aides in the philosophy of the program and what was expected of them. In addition, they were acquainted with the master lesson plan for the day, so they could be a part of the total program. All aides were instructed to continually assist the children in verbalizing activities. The parent aide was instructed to observe the teacher and the teacher's aide while they were instructing the children in the hope that modeling might occur.

VIII.

Parent Involvement

From the beginning of the program our parents were invited to observe the program any time they wished. We asked them to observe from the observation room, but later on, they were invited to come into the classroom. After approximately two months, the parents were invited to become aides in the program. Several training sessions were given, and then, they were assigned a definite function within the master lesson plan. There was some difficulty in the beginning in the children reacting to their mothers, but later on, they became oblivious to the fact that their parent was in the room. This provided an opportunity for the parent to model after the teacher in the use of teaching techniques and behavior modification. It also provided them with an understanding of the curriculum and the program, so they could reinforce it at home.

Another important aspect of the parent involvement was the field trip. Many field trips were taken during the school year and during the summer. Both parents and younger siblings were invited to attend the field trips during the school year. During the summer the older siblings were also invited to attend, in order that this could be a learning experience for the whole family, and language activities could take place at home in the discussion of the trip. The field trips provided an informal setting in which staff could get to know the parents and vice versa. An extremely fine rapport has been developed between the parents and the staff, so the child has benefited from this team approach to his education. The school is a friend

and an extension of his home, and the home becomes an extension of the school. We think this has been one of the strongest aspects of our program.

Another important part of this has been the inservice training given to parents in the use of behavior modification in the home during the Sunday afternoon meetings with parents. Over 50 per cent, and sometimes 70 per cent, of the parents attended the sessions. The kindergarten closing program was attended by 125 people, including grandmothers, cousins, and all manner of relatives who came to see the graduation of the children from kindergarten. We felt that this graduation program was very important, since we did not want the children to feel that because they would have the same teacher in the first grade, they had failed. The graduation ceremony accented the fact that the child passed and provided an opportunity for everyone to have a sense of achievement.

Process Evaluation

Evaluation was an on-going, continuous activity. Daily evaluation of the teaching-learning situations facilitated the modification of teaching approaches and learning tasks. The teacher and aide were free in the afternoon to evaluate the activities of the morning and to plan for the following day. For example, if the child was unable to accomplish a task, the staff worked to break the task down even further for the child. Rather than the emphasis being on the child's failing to do the task, the responsibility was on the staff to find a way to teach the child, using the strategies discussed previously. The director of the project met with the staff at least twice a week to discuss program adaptation. This period in the afternoon was also used to develop new task Boxes and to discuss with the aide the progress of the children in the areas for which she was responsible.

An evaluation committee composed of principals, vice principals, one supervisors of elementary schools, the Directors of Instruction, Curriculum and Pupil Services, and special education teachers and regular education teachers was formed. This committee observed and evaluated the program unannounced at least every three weeks. They were asked to complete evaluation forms which were reviewed by the staff that very day to determine if modifications were necessary.

All visitors were also asked to complete an evaluation form. Kindergarten teachers who observed as part of the in-service componet completed these same forms. The staff considered all of these evaluations in light of the objectives of the program and the needs of children with learning disabilities.

The evaluation forms are included in the appendix. A simple open ended evaluation was used during the first three months and a more detailed evaluation form was used for the remainder of the year.

In addition, the parent aides who worked with the children on the Boxes were asked to make notations on the assignment ticket of each child indicating the success of the child with the task. From these tickets, the teacher was able to plan the next day's activities for the child. In some cases, the task had to be restructured, or broken down into smaller parts in order for some of the children to achieve. The value of this was that evaluation and change took place immediately. We didn't have to wait until 10 days later when the teacher might give a post-test to determine whether or not the child was achieving the goals. The teacher kept daily records of the progress of the children, which were examined and discussed by the staff. The progress of each child was evaluated in terms of the goals of the curriculum and in terms of the goals determined for that child.

X. The First-Grade Year

All of the children were promoted to the first grade, but they remained in the same room with the same teacher. The kindergarten program had been geared to remediating the deficit areas of the children. The first-grade year is geared to continuing the remediation of the deficit areas but to using the strength of the child as the focal point. The Slingerland Pre-school Language Disability Test was administered at the end of kindergarten to determine the deficit areas of the children, as well as their strengths. The initial screening battery was re-administered to further determine the learning strengths of the children.

The Distar language program was not completed in kindergarten because of lack of time but was completed during the first semester of the first grade. Informal language development continued. Language experience approach combined with the Sylvia Ashton Warner ideas are being used to develop language and sight vocabulary. The children are asked to give a sentence or two describing something that had happened to them at home. The aide or teacher writes the story on the page for the child. The child then decides which word he would like to learn. He is taught by the Fernald method of tracing and saying the word drawing out the syllables as he traces. When he is able to trace the word without looking and to say the word, the word is then put into his word bank. Word banks are checked daily, and words which had been forgotten are re-traced the following day. The children develop a large sight vocabulary out of their own language and learned encoding methods. This also gives the child a chance to communicate with teacher or aide.

The Slingerland Multi-sensory Reading approach is used with all of the children, but they are divided into small groups for this

instruction. This multi-sensory approach involves the use of Orton-Gillingham phonics, with VATK methods. This method is very slow and deliberate and not much progress is expected to be seen until the second semester when the child begins to put it all together. Consonants and vowel sounds are introduced very slowly and in a definite sequence.

Small books are available from Educators Publishers to reinforce the phonics being taught so that the children get a book before all sounds are taught. In addition to the multi-sensory approach for reading, each of the children were put into a basal. Therefore, each child has three reading experiences per day, involving the multi-sensory instruction, the Fernald language experience approach, and the basal. Basals are used so that the child would have a book to take home and feel that he is receiving instruction similar to other first graders. Basals are used as medias rather than as a methodical approach for teaching reading. The two fast-moving groups are using the Time Machine series of Field Enterprise. The teacher uses the VATK method in teaching the new words. The third group is using the Ginn 360. There is another group of four children who are still in readiness. However, even this group has a sight vocabulary made up of the words in their own word bank and are receiving the multi-sensory approach.

The children have responded very well to the Distar math. The Distar math has an advantage over the Distar language program in that it has many manipulative experiences. The boxes continue to be used especially in reinforcing math activities. Individual and small group instruction is just as necessary for math as it is for reading.

On-going diagnosing of children determining their strengths and their weaknesses has been taking place. We are still remediating the visual discrimination and perception area. One of the largest areas that remains to be successfully remediated is spatial awareness. A special program using Getman material will be initiated to help the children who need remediation in this area. In the on-going diagnosing, we have used the Wepman Test for Auditory Discrimination, the Illinois Test of Perceptual Abilities, the Primary Mental Abilities, and the Neurological Developmental Observation, as well as the Slingerland special.

During the first semester the first-grade teachers have been observing in the program. Beginning the second semester, the second-grade teachers who will have these children in the Westminster area next year will be observing. Substitutes are paid for by the project.

The regular social studies and science curriculum is being used. The children have art, music, and physical education with the special teachers. However, so much time is spent working with the 5 reading groups, the Fernald language experience, and the multi-sensory approach that there is very little time left. The multiplicity and intensity of the problems of the children and their deficits necessitate an intensive program in reading and math.

Care is taken that the children do not feel too much pressure. We have been very careful to use time wisely but to have fun as we teach and learn.

Parent involvement and classroom management continue as described in the kindergarten section.

XI. Discussion of Reasearch Findings

Duane Riddle

The research of this project is directed to the following questions:

1. Can children with specific learning disabilities be identified in beginning kindergarten?
2. Which test tasks most accurately predicted later school success?
3. Did the experimental children who received the special curriculum achieve significantly better than the control children who did not have a special program?

An equal amount of girls as compared to boys identified as potential academic risks during the pre-school years is in direct contrast to other studies on sex and learning disabilities. Typically, educators have found a greater proportion of boys educationally handicapped.

A possible explanation for the great number of boys in programs for the educationally handicapped is overt behaviors. Decisions for placement may have hinged on inappropriate behaviors rather than deficient or delayed developmental skills. The Westminster project is suggesting that a more academically objective screening measure is needed to determine those students in need of supplementary educational assistance.

The initial screening tests were used to determine those students highly amenable to failure in kindergarten or first grade. The criterion of concern was determination of high risk children. That is - academic failure highly probable. Comparative data on the high risk children who participated in the research and the low risk children who remained in the regular classroom are not available. Classroom achievement at the end of the first grade for both high risk and low risk children will determine if the screening battery has predicitive validity.

The student's ability to more carefully discriminate (under, behind, beside, etc.) and verbally communicate an understanding of environmental surroundings if one of the essentials of learning. The experimantal group did significantly better $P \leq .02$ on the Northwestern which is a measure of syntactical structures. It seems appropriate to infer that comparable kindergarten children who experience a curriculum as described in this program should demonstrate increased grammatical fluency at the end of the kindergarten year.

This increased performance has marked importance because transfer of learning is of major importance on a longitudinal basis (Karnes). Therefore, it would be only natural that a child with increased ability to discriminate stimuli should reveal greater transfer of learning.

An interesting discovery is the significant multiple R obtained between the pre-reading and screening Procedures Test, Slingerland (total), and the Primary Mental Abilities. The Slingerland is a measure of reading readiness which measures auditory and visual discrimination abilities according to several criteria.

There is reason to believe that educators should determine very carefully the educational objectives that follow the administration of the Slingerland Test. For instance, what important curricular decisions are needed as a result of a high score on the test as contrasted to a low score on the test. As a result of these findings the county is planning to use Slingerland scores to determine reading strategies.

It would be necessary to determine if the high relationship between the two variables, score on Slingerland and score on PMA,

retain a high relationship at the end of the first-grade year.

The experimental group revealed a multiple R of .66 on the auditory distraction subtest of the NDO and the PMA. The negative correlation is appropriate since a low distractability score should lead to increased performance in the classroom. This suggests to educators that to maximize academic learning in the classroom for children with learning problems audible noises or activities must be kept to a minimum. This is not surprising and has been indicated by several educators (Cruickshank, Myklebust).

However, the present study controlled both for auditory and visual distraction but obtained a negative R only for auditory. Perhaps auditory distraction is a greater disturbing influence to learning for children with learning problems. Further research is needed to substantiate these findings. A possible conclusion is that management and control of behavioral activities is as crucial, if not more so, than the type of curriculum offered.

Additional data remains to be collected. Shortly, the WPPSI will be re-administered to both the experimental and control groups. It will be important to determine if the experimental and control groups reveals signifcant increases in intelligence as other studies have shown (Karnes and Engellman).

Over the next two years it will be necessary to determine if these described gains or correlations are sustained. Some studies have demonstrated marked decreased in gains on certain variables. Since the real test is stability over time, the predictive value of this study remains to be seen.

I. Pre and Past Data Analysis

1. Tests of significance of differences between related pre-and-post means among groups were computed.

2. Analysis of covariance using pre-test scores as the covariate was computed.

Findings

Mean Scores on Northwestern Syntax Test

	N	Receptive Language		Expressive Language	
		Pretest Mean	Posttest Mean	Pretest Mean	Posttest Me
Experimental	15	21.11	28.22	14.16	26.05
Control	16	23.00	26.12	17.41	21.87

The Experimental group's pretest means were lower than the Control group's on both subtests, although the difference was not statistically significant. However, the Experimental group's posttest means were higher than the Control group's on both subtests. Again the difference between the group's means was not statistically significant; but the increase in mean score made by the Experimental group on the posttest approached significance on both subtests (t= 1.3 and 1.9 respectively).

II. Mean I.Q.'s For Subtests Of Primary Mental Abilities Test

	N	Verbal	Perceptual	Numerical	Spatial	Total
Experimental	18	103	100	104	91	99
Control	14	97	105	96	85	94

Again, the difference between the mean scores of the two groups is not statistically significant; but it should be noted that in all but one case (Perceptual) the mean scores of the Experimental group were higher than those of the Control group.

III. Slingerland Analysis

The ultimate evaluation of the objective is also a planned, long term process. However, for a preliminary look at progress, the scores on the Slingerland Learning Disability Pre-School Screening Inventory administered in June were used as criterion of evidence of the remediation of developmental deficiencies.

Data Analysis

A test of significance of differences between means was computed. A comparison was made between the scores of the Experimental and Control groups. The performance of a group of pupils initially identified as children with low potential for learning disabilites was also used as a comparison.

Findings and Conclusions: References

Mean Scores on Slingerland

	N	Mean Score
Experimental	15	27.50
Control	16	22.05
Low Risk	18	38.75

The manual states that scores below 30 may be considered evidence of potential learning problems. The group identified initially as "low risk" made an average score above the cut-off scores, while the two groups identified initially as "high risk" groups made average scores below the cut-off score. Using the Slingerland scores as criterion, this furnishes some evidence as to the validity of the initial screening procedures.

In addition, the fact that the mean of the Experimental group's performance is approaching normal achievement is evidence also of the effectiveness of the remedial procedures being used.

IV. Slingerland and PMA analysis

It is planned that the achievement performance of the entire kindergarten population will be followed-up through the primary grades. The results of the screening battery will be correlated with achievement test results and teacher grades to determine difference in achievement through the years of those children identified at the beginning of kindergarten as potential "high" and "low" risk children for experiencing learning difficulties.

Although the project involves longitudinal evaluation, for the first year's evaluation the results of the screening instruments were correlated with the results of the PMA administered in September 1972. (The Slingerland had been administered in May 1972). Correlations also will be computed between these test scores and the results of the screening patterns as additional evidence of the predictibility of the initial test scores.

It must be noted that since the Slingerland and the PMA are group administered paper and pencil tests they are not suitable instruments for use with a beginning kindergarten population.

A series of multiple regression equations for the Experimental and Control groups were computed in a step-wise manner using PMA total score as the criterion variable. The data are not yet available for determing relationship between "low risk" pupil scores on the criterion and "high risk" pupils.

The independent variables used were: verbal IQ (WPPSI); geometric design (WPPSI); animal house (WPPSI);information (WPPSI); arithmetic (WPPSI); comprehension (WPPSI); expressive language (Northwestern); Denver Developmental Test; gross motor (NDO); visual distraction (NDO); Stanford-Binet IQ; Wechsler Pre-School and Primary Scale of Intelligence full scale I.Q.; Slingerland total score; visual memory subtests of Stanford-Binet; digit memory subtests of Stanford-Binet; and language subtest of the Stanford-Binet. With the exception of the Slingerland, all variables are pre-test scores obtained by subjects entering kindergarten, Fall, 1971.

The WPPSI full scale IQ correlated .77 with PMA for the "high risk" groups. This is comparable to other research findings on the relationship between the WPPSI and other ability tests for normal populations. The correlation between auditory distraction (NDO) and the PMA was -.66. (A low distractability score is desired; therefore, a minus correlation should result). The Slingerland, administered concurrently with the PMA correlated .80 with the PMA. All of the correlations are significant at the .05 level.

These preliminary data indicate that the WPPSI and the auditory distractability test administered at the beginning of kindergarten correlated significantly with the PMA administered one year later. The finding of the significant correlation between the auditory distractability measure and the criterion seems to have important implication for the identification of learning disabilities.

APPENDICES

LIST OF APPENDICES

A Screening Instrument

B Evaluation Forms

C Task Boxes

D Teacher Made Materials

E Basic Materials of Instruction and Equipment for Classes

APPENDIX A

Screening Instrument

A. Initial Screening Instruments

1. Teacher referral

   a. Teachers were asked during the last week of September to refer children with problems. A 2-day workshop in August had introduced the Title III project, the Neurological Developmental Observation, the Teachers' Referral Form, and ways of identifying the problem learner.

   b. During the second week in October, teachers were given an opportunity to refer additional children.

2. Screening tasks - The teacher and the aide visited each kindergarten several times, played with the children, and became well acquainted with them. The children were told that they were going to play some games. The initial testing battery began during the second week of September and continued during October.

   a. Visual memory tasks from Binet

      (1) Picture memories - 3 year task
      Material: Four cards with animal pictures.
      Procedure: Show card (a) and ask, "What is this?" "Yes, it's a cow (or moo-cow)." If the child does not name it correctly, tell him the name. As this card is being removed, say, before showing card (A), "Now we are going to find it!" Then show card (A) and ask, "Where is it?" If necessary, say, "Show me," or "Put your finger on it."
      Show card (b) and, pointing to each object, ask, "What is this?" If the child does not name it correctly, tell him. As this card is being removed, say, "Now we are going to find them!" Then show card (B) and ask, "Where are they?" Be careful to avoid naming the objects when you are asking the child to locate them from memory.

      Score: 1 plus. S must clearly indicate the correct objects. Additional enumeration makes the response minus.

      ○ Picture memories (1+)[ ] a)..... b).....

(2) Naming Objects from memory - 4 year task

Material: Automobile, dog, shoe, cat, spoon, engine, doll, scissors, thimble, box.

Procedure: Place the automobile, dog, and shoe in a row before the child in the order indicated from his left to his right. Call his attention to each object, asking him to name it. Accept whatever name he gives. If he hesitates, name it for him. Then say, "Now shut your eyes tight so that you can't see them." Screen the test objects from his sight and cover the dog with the small box cover. Remove the screen and say, "Open your eyes. Look! Which one did I hide?" If the child points without naming the hidden object, say, "Yes, what is it?" Repeat the procedure for (b) and (c), hiding in turn the engine and then the doll. Examiner must be careful to prevent the child from lifting the box cover before he has named the hidden object, thus defeating the purpose of the test. It is not necessary to be overly insistent that the child close his eyes while the object is being hidden since the screen hides the procedure.

(a) Automobile, dog, shoe.
(b) Cat, spoon, engine.
(c) Doll, scissors, thimble.

Score: 2 plus. The child must designate the object either by its correct name or by the name he used when it was first shown to him.

☐ Naming objects from memory (2+) a)...b)...c)..

b. Auditory memory from Binet

(1) Repeating 2 digits - 2½ years

Procedure: Say, "Listen; say 2." "Now, say 4-7," etc.
(a) 4-7 (b) 6-3 (c) 5-8.
Pronounce the digits distinctly and with perfectly uniform emphasis at the rate of one per second.

☐ Repeating 2 digits (1+)
a) 4-7.... b)6-3.... c)5- ....

(2) Repeating 3 digits - 3 year task

Procedure: Say, "Listen; say 4-2." "Now, say 6-4-1," etc.
(a) 6-4-1 (b) 3-5-2 (c) 8-3-7
Pronounce the digits distinctly and with perfectly uniform emphasis at the rate of one per second.

Score: 1 plus. The series must be repeated in correct order without error after a single reading.

(3) Repeating 5 digits - 7 year task

Procedure: Say, "I am going to say some numbers and when I am through I want you to say them just the way I do. Listen carefully, and get them just right." Before each series repeat, "Listen carefully, and get them just right." Pronounce the digits distinctly and with perfectly uniform emphasis at the rate of one per second.
(a) 3-1-8-5-9 (b) 4-8-3-7-2 (c)5-6-1-8-3

Score: 1 plus. The series must be repeated in correct order without error after a single reading.

The 3 digit task did not screen out enough children.
The 5 digit task screened out almost every child.
Therefore, a 4 digit task was added.

c. Auditory memory for sentences - from an alternate subtest from year 4 on Binet.

Procedure: Say, "I want you to say something for me. Say, 'big boy' (or 'big girl'). Now say, 'I am a big boy' (or 'girl'). Now say . . . ."
Introduce the second sentence by repeating, "Now say . . ."
(a) "We are going to buy some candy for mother."
(b) "Jack likes to feed the little puppies in the barn."
If the child hesitates, urge him to try by asking him to "Say it." It is, of course, never permissible to repeat the sentence.
Errors include omissions, substitutions, additions, changes in words or in the order of words, but not contractions, e.g. "we've" for "we are".

d. Janisky letter naming A B C J K F
In a telephone conversation with Dr. Janisky she stated that in her second study she found that letter naming was the best predictor of succuss in reading. However, her study was with kindergarten children in the spring and ours was in the fall. Dr. Janisky feels that any child (including inter-city) who cannot identify A, B, or C is going to have trouble with school.

e. Language and comprehension
Questions 21 through 25 of the Denver Developmental Test were used.

(1) Child answers questions: "What do you do when you are cold? Hungry? Tired?"
(2) Examiner asks child to: "Put block on table, under table, in front of chair, behind chair." Caution: Examiner not to gesture with head or eyes.
(3) Examiner asks child: "Fire is hot, ice is _____. Mother is a woman, dad is a _____. A horse is big, a mouse is _____."
(4) Ask child to define: ball; lake; desk; house; banana; curtain; hedge; pavement. Pass if defined in terms of use, structure, composition or classification.
(5) Examiner asks: "What is a spoon made of? A shoe made of? A door made of?" (No other objects may be substituted.)

f. Geometric designs - The first six forms on the WPPSI geometric design test were used.

3. Emotional factors evidence during the testing situation were noted, such as extreme hyperactivity, shyness, refusal to try, withdrawal, etc.

4. Speech problems were noted.

Cut offs were established for these tasks based upon norms already established by the specific standarized test. There were no norms for the Janisky Letter Naming test or the 6 geometric designs. Cut offs were determined based upon the scores of our kindergarten population.

Any child having two deficit areas (including teacher recommendation) was considered vulnerable and became part of the second screening.

The initial screening was designed to be very tight, because we did not want any problem learners to slip through. We identified 137 vulnerable cases in the initial screening. Forty-seven (47) of these were eliminated in the second screening. Therefore, the initial screening falsely identified 34%

B. Second Screening

1. Neurological Developmental Observation
Dr. Mark Ozer
Director of Learning Disability Clinic
Children's Hospital
Washington, D. C.

A nurse and educational specialist administered the examination to the child with the teacher present. Cut offs were established for our population. These were:

Auditory	24
Visual	19
Kinesthetic	15

Distractability was noted when the score without distraction was at least twice that with distractions.

2. WPPSI -- Was administered to all vulnerable cases by senior psychology students from Western Maryland College.

3. We had intended to use the results of the Goldman Fristowe Articulation Test, and the Northwestern Syntax Test, but the Towson State College students were unable to complete the testing in time, However, we now have that data. We had to rely upon our language scores from the original screening data.

Using the data from the second screening, two categories of children were now removed from the vulnerable category. We eliminated the children who were at least average in intelligence and who had less than 2 significant deficit areas. We also removed those who had I.Q. scores below 70.

There were 84 children remaining, all of whom we felt would have trouble, but we had to cut the list to 50 for the final phase. These 84 problem children were then put into three categories:

(a) Young - chronologically younger than 5-1
(b) Slow learners (based on I.Q.)and over 5-1 chronologically
(c) Average intelligence and over 5-1 chronologically

Next we attempted to match children within each category. Fifty-seven children became part of the final screening. These were not necessarily the 57 worse cases out of the 84. They were the ones who matched. We think all 84 need our program, but we can only serve 18 to 20. Our project was written to have a matching control group so we could only include children who matched.

C. Final Screening

1. Graduate students from the University of Maryland, Department of Psychology administered the Binet Adaptive.

2. Parent questionnaires and health record forms developed in Dr. Mark Ozer's clinic were sent to parents. Students from Dr. William Miller's Social Psychology class made home visits to collect the forms. They were trained by Dr. Miller and a member of Dr. Ozer's staff.

3. Adjustment in matches had to be made based upon the results of the Binet testing. New matches were determined. Matched children were selected to be either control or matched mainly on the basis of maintaining a ratio from each school. Only 3 parents out of 20 refused to permit their child to participate. In two cases, the matched control child's parent accepted. I did not think that we could use the control child in the third case because the child was from East End, and we already had a large ratio from that Kindergarten. Unfortunately, the control children in the other two cases were also from East End. So, we still have one child to add, but we have 19 matches, and the project was designed for 18 matches. We wanted 20 for a cushion.

Constltants for Screening

Dr. Mark Ozer	Children's Hospital Washington, D. C.	Paid consultant
Dr. Jeanette Janisky	Telephone conversation	

Dr. Katrina de Hirsch's book

Personal interviews with:

Mrs. Hessa Miller, Syracuse University research project

Dr. Henry Marks, Johns Hopkins Hospital

Miss Regina Cicci, University of Maryland Evaluation Clinic

Dr. Irene Hanson, Towson State Teachers College

Dr. Peter Valatutti, Coppin State College

Dr. Murray Kappelman, University of Maryland Evaluation Clinic

Dr. Gilbert Shiffman, Johns Hopkins University

Dr. Miriam Hardy, Johns Hopkins Hospital

Dr. Raymond Clemmens, University of Maryland

Dr. Ureitha Peterson, George Washington University

APPENDIX

BOARD OF EDUCATION OF CARROLL COUNTY
Westminster, Maryland

EVALUATION FORMS

Welcome to our Title III - Early Intervention to Prevent Learning Problems.

We are glad you can observe today. You are reminded that the children you are observing are children with learning problems. Each of them has at least 2 severe deficit areas, such as language development, visual or auditory memory, visual or auditory perception, visual motor integration, or emotional problems. The I.Q. range is from 75 to 110. The curriculum has been developed especially for children with learning problems and is highly manipulative in nature. It is not necessarily a curriculum which is necessary for normal children.

I. Describe learning incidents observed which you think were helpful to the children. Use other side of page if necessary.

II. Describe learning incidents observed which you think were not helpful to the children. Use other side of page if necessary.

III. Comments - Use other side if necessary.

Name:_____ Position_____ Date_____

JM/mm
2/72

APPENDIX B

BOARD OF EDUCATION OF CARROLL COUNTY
Westminster, Maryland

EVALUATION OF THE PROGRAM IN TERMS OF OBJECTIVES

I. Curriculum Objectives

Did you see activities which promoted the following?
(Answer Yes, No , or write a comment)

	Yes	No	Comment
1. Gross motor skills			
2. Fine motor skills			
3. Visual discrimination and perception			
4. Auditory perception development			
5. Language development			
6. Using judgement and reasoning in common sense situations			
7. Seeing cause and effect relationships			
8. Number facility			
9. Classification skills			
10. Problem solving skills			
11. Conversation skills			
12. Remediation of modality weaknesses			
13. Other cognitive skills - please list			

II. Teaching Strategies - (Including the fostering of affective development) Did you see? (Answer Yes, No, write a comment)

	Yes	No	Comment
1. A well planned session			
2. Audio stimuli being controlled			
3. Visual stimuli being controlled			
4. Creativity being fostered			
5. Children being accepted and feeling accepted			
6. Children verbally interacting with adults			
7. Children verbally interacting with each other.			
8. Ego strength evidence in the children			
9. Any signs of strain or frustration in the children			
10. Growth in independent self care			
11. Task analysis - breaking down into simple parts			
12. Individualization of instruction			
13. Prescription teaching			
14. Children having success			
15. Children enjoying themselves			
16. Adults expressing approval, acceptance, or concern.			
17. Children showing respect for each other			

	Yes	No	Comments
18. Positive reinforcement being used			
19. Activities performed by the aides to reinforce what the teacher and aide are teaching			
20. Children given immediate feedback as to whether they were right or wrong			
21. Children enjoying themselves			

III. List any suggestions for improvement.

JH/mm
4/72
Title III

APPENDIX C

Task Boxes

The following tasks boxes have been included as further reinforcement of the Title III Cognitively Oriented Kindergarten Curriculum. The materials used to reinforce each concept were placed in a box*, measuring 12" x 7" x 3½". Along with these materials was also placed a language master card on which was taped directions to tell the child what it was that he was to do with the box contents. The tasks boxes for each section of the curriculum were coded differently to facilitate record keeping, and to assist the child in finding the box with which he was to work.

When the child was to work on the boxes he received a coded card with approximately 5 boxes that he had been programmed for at that time. The child would visually match the symbol on the card to the symbol on the end of the box. He would then empty the box contents onto a small work board and play the language master card through the language master to receive instructions. Upon going back to his work space, a teacher assistant (high-school students and parent volunteer) would talk with the child so that he would verbalize what it was that he was to do. The child then performed the tasks.

On the top of the box were typed instructions for the assistant so that she could question the child to reinforce other areas of the curriculum which were not directly included on the taped direction card in the box. This way manipulative activities were coupled with language development.

The assistant then made notes on the child's coded card to inform the teacher of the child's performance so that further programming could take place.

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* Boxes were ordered from:

American Packing Display Corporation
6008 Quad. Avenue
Baltimore, Maryland, 21237

(Die Cut #3 cartons)

Task Boxes

Body Awareness

Symbol	Task	Additional Comments
		In most instances materials have not been listed in this column since it is felt that they are self evident
1	Point to the person's nose in the picture.	On all triangles 1 - 25 boxes are for body awareness. The child is instructed to find the body part on the magazine picture that is identified on the language master card. The child is then instructed by the assistant to: 1. Point to the body part on himself. 2. Point to the body part on a doll. 3. Point to the body part on the assistant. 4. Move the body part. 5. Child can name the body part when the assistant points to it on child's body.
2	Point to the person's head.	
3	Point to the person's eyes.	
4	Point to the person's eyelids.	
5	Point to the person's ears.	
6	Point to the person's mouth.	
7	Point to the person's lips.	
8	Point to the person's hair.	
9	Point to the person's neck.	
10	Point to the person's arm.	
11	Point to the person's should-ers.	
12	Point to the person's hand.	
13	Point to the person's fingers.	
14	Point to the person's wrist.	
15	Point to the person's cheeks.	
16	Point to the person's legs.	
17	Point to the person's knees.	
18	Point to the person's toes.	
19	Point to the person's elbow.	
20	Point to the person's ankle.	
21	Point to the person's foot.	

Symbol	Task	Additional Comments
22	Point to the person's teeth.	
23	Point to the person's torso.	
24	Point to the person's abdomen.	
25	Point to the person's eyebrows	
26	Find the part of the body that is missing in the picture and put it in the correct place. (head)	In triangles 26 - 49 boxes the child is given a magazine picture of a person with one part missing. He is then instructed to name the missing part and then look in an envelope with various fooler pieces to find it and put it in the correct place.
27	Same as triangle 26 (eyes).	
28	Same as triangle 26 (eyelids).	
29	Same as triangle 26 (nose).	
30	Same as triangle 26 (mouth).	
31	Same as triangle 26 (ears).	
32	Same as triangle 26 (hair).	
33	Same as triangle 26 (neck).	
34	Same as triangle 26 (arm).	
35	Same as triangle 26 (shoulders).	
36	Same as triangle 26 (hand).	
37	Same as triangle 26 (wrist).	
38	Same as triangle 26 (fingers)	
39	Same as triangle 26 (cheeks)	
40	Same as triangle 26 (legs).	
41	Same as triangle 26 (knees).	
42	Same as triangle 26 (toes).	
43	Same as triangle 26 (elbows).	
44	Same as triangle 26 (ankles).	

Symbol	Task	Additional Comments
45	Same as triangle 26 (foot).	
46	Same as triangle 26 (teeth).	
47	Same as triangle 26 (torso).	
48	Same as triangle 26 (abdomen).	
49	Same as triangle 26 (eyebrows)	
50	Put the pieces of the puzzle together to make a face.	Child is given a face puzzle from a magazine cut into 4 pieces. He is instructed to put puzzle together to make a face and to name facial features. (nose, eyes, mouth, etc).

Fine Motor Development

Symbol	Task	Additional Comments
(1)	Put the things in the box into the correct holes.	Child is given a tupperware shape-o toy and is instructed to put the shapes in the correct holes in the toy.
(2)	Put the flat square blocks in the box in a stack to make a tower that won't fall over.	Child is given large, flat, square blocks from building block kit and is instructed to stack them. (alignment is not stressed)
(3)	Put the cubes in the box into a stack to make a tower that won't fall over.	Same as above but using cubes.
(4)	Put the rectangle blocks in the box into a stack to make a tower that won't fall over.	Same as above but with rectangle blocks.
(5)	Put the blocks in the box into a line to make a straight train	Child is given 6 square blocks and is instructed to align them in form of a train.
(6)	Put the two rods together so that the marks are lined up on each.	Child is given 2, 4" rods with marks every 3" on them and is told to put the two rods together so that lines on each rod are together.
(7) (8) (9)	Repeat (2) (3) (4) respectively having the child make sure that blocks are stacked so that all edges are even.	
(10)	Put the spools on the rope in the box.	Child is given 6 big spools and a thin rope on which to thread the spools.
(11)	Put the spools on the shoe-string in the box.	Child repeats 10 above using same kind of spools and shoe-string.
(12)	Put the beads on the shoe string in the box.	Child is given 10 beads and a shoe string that is knotted on one end and is instructed to thread the beads.
(13)	Pour the rice from one container in the box into the empty container.	Child is given 2 containers, one full of rice and one empty. Child is instructed to pour rice from one container to the other.

Fine Motor Development

Symbol	Task	Additional Comments
(1)	Put the things in the box into the correct holes.	Child is given a tupperware shape-o toy and is instructed to put the shapes in the correct holes in the toy.
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(3)	Put the cubes in the box into a stack to make a tower that won't fall over.	Same as above but using cubes.
(4)	Put the rectangle blocks in the box into a stack to make a tower that won't fall over.	Same as above but with rectangle blocks.
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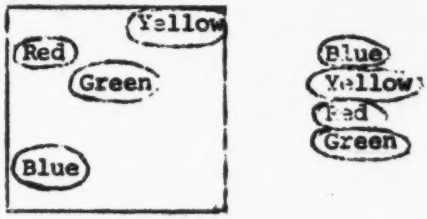
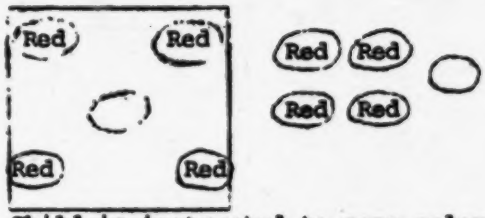
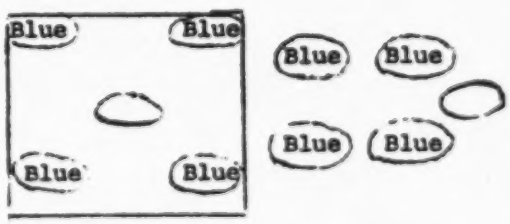
(12)	Put the beads on the shoe string in the box.	Child is given 10 beads and a shoe string that is knotted on one end and is instructed to thread the beads.
(13)	Pour the rice from one container in the box into the empty container.	Child is given 2 containers, one full of rice and one empty. Child is instructed to pour rice from one container to the other.

Symbol	Task	Additional Comments
(14)	Same as (13) only using sand.	
(15)	Same as (13) only using sugar.	
(16)	Same as (13) only using salt.	
(17)	Same as (13) only using water.	
(18)	Pour the rice from the plastic butter dish into the glass.	Box contains plastic butter dish, a plastic glass and rice.
(19)	Pour the sand from the plastic butter dish into the glass.	
(20)	Pour the sugar from the plastic butter dish into the glass.	
(21)	Pour the salt from the plastic butter dish into the glass.	
(22)	Pour the water from the plastic butter dish into the glass.	
(23)	Pour the rice from the plastic butter dish into the glass up to the marked line.	Glass now has a magic marker mark ½ way up from bottom.
(24)	Pour the sand from the butter dish into the glass up to the marked line.	
(25)	Pour the sugar from the butter dish into the glass up to the marked line.	
(26)	Pour the salt from the butter dish into the glass up to the marked line.	
(27)	Pour the water from the butter dish into the glass up to the marked line.	
(28)	Trace the straight line on the plastic sheet with a crayon.	Child is given a dittoed line covered with acetate and is told to trace the line with a crayon.
(29)	Make a line in the path with a crayon.	Child is given a ditto path(straight) and is told to make a line inside the boundaries and not to go out of the boundary.
(30)	Same as (28) but with curved line.	
(31)	Same as (29) but with curved path.	

Visual Discrimination

Symbol	Task	Additional Comments
1	On the card is a pencil. Find all the things in the box that are the same.	Child sees one pencil. He is then instructed to find all the things that are the same from various objects including pens, pencils, and crayons. Assistant then holds up a long yellow pencil and a short white pencil and says "are they the same?" Then find all the things in the box that are not the same.
2		
3		
4	Repeat 1 above using various other objects. Be careful that objects are same in all aspects. (color, size, shape, texture, etc.)	
5		
6		
7		
8		
9		
10		
11	Which thing in the box is "not the same" as the others?	Given: 3 yellow plastic roses and 1 white daisy. Child picks one that is not the same.
12		
13		
14	Same as 1 through 10 except in directions use the term "alike" in place of "same".	
15		
16		
17		
18		
19		
20		
21		
22	Same as 11 above but using terms "not alike" in place of "not the same".	
23		
24		
25	Find something in the box that is "different" from the object on the card.	Include in the boxes such things as buttons, counters, cups, saucers, shapes, etc.
26		
27		

Symbol	Task	Additional Comments
28	Put the circles in the box onto the same circle on the matching card. (All circles are same size and color)	Child is given 3-D circles and is told to match them to the circles on matching card that is the same size and color.  Name the shape -(circle) Use template (knockouts) for all "shapes" in boxes.
29	Put the squares in the box onto the squares that are the same on the matching card.	All squares are the same size and color. Child must name the shape.
30	Put the triangles in the box onto the triangles that are the same on the matching card.	Five loose triangles and 5 triangles on a matching card. Child must name the shape. All triangles are same size and color.
31	Put the rectangles in the box onto the rectangles that are the same on the matching card.	Five loose rectangles and 5 rectangles on matching card. Child must name the shape. All rectangles are same size and color.
32	Find all the circles in the box.	Box should include all other shapes.
33	Find all the triangles in the box	Box includes several triangles and many other geometric shapes.
34	Find all the squares in the box.	Box includes several squares. Also many other geometric shapes.
35	Find all the rectangles in the box.	Box includes several rectangles and many other geometric shapes.
36	Put all the objects into piles that are the same shapes.	Three circles, four triangles, one rectangle, and two squares.
37	Same as 36 above but with different number of each shape.	
38	Same as 36 above.	
39	Same as 36 above.	

Symbol	Task	Additional Comments
40	Put the red circles in the box onto circles that are the same on a matching card.	Box includes four red circles and a circle of another color. Child matches loose circles to the circles on the cards. All circles are the same size.
		
40A	Find all the red objects in the box.	Child is instructed to name color "red". Box contains assorted objects of many colors.
41	Find all the red squares in the box.	Many shapes should be in this box with many colors. Child only selects red squares.
42	Find all the red circles in the box.	
43	Find all the red triangles in the box.	
44	Find all the red rectangles in the box.	
45	Find all the things in this box that are red.	Include red pencil, cup, circles, triangles, etc.
46	Put all the blue circles in the box onto circles that are the same on the matching card.	Box includes 4 blue circles, and a circle of another color. Child matches loose circles to the circle on the cards. All circles are the same size.
		
46A	Find all the blue objects in the box	Child is instructed to name color "blue" . Box contains assorted objects of many colors.

Symbol	Task	Additional Comments
47	Find all the blue squares in the box.	Many shapes should be in this box with many colors. Child only selects blue squares.
48	Find all the blue circles in the box.	
49	Find all the blue triangles in the box.	
50	Find all the blue rectangles in the box.	
51	Find all the things in this box that are blue.	Many shapes should be in this box with many colors. Child only selects blue objects.
52	Put the objects in the box on the matching card	All circles same size. Two colors,red and blue.
53	Put the objects in the box on the matching card.	All squares same size. Two colors, red and blue.
54	Put the objects in the box on the matching card.	All triangles same size. Two colors, red and blue.
55	Put the objects in the box on the matching card.	All rectangles same size. Two colors, red and blue.
56		
57		
58		
59		
60	Repeat boxes 46 - 55 having child sort the shapes in groups of same colors.	
61		
62		
63		
64		
65		
66	Sort the objects in the box into groups that are the same. Child may group by color or shape.	Two shapes (circle, square) 1 size Two colors (red, blue)

Symbol	Task	Additional Comments
67	Sort the objects in the box into groups that are the same. Child may group by color or shape.	Two shapes (circle, triangle) one size Two colors (red, blue)
68		
69		
70		
71	Sort the objects in the box into groups that are the same. (Vary shapes, size remains constant and colors are red and blue)	
72		
73		
74		
75		
76		
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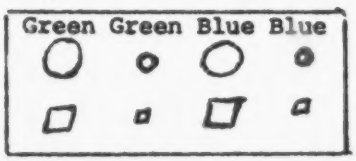
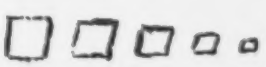
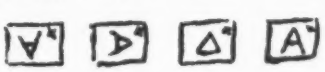
84		
85		
86		
87		
88	Additional boxes were made to reinforce the sorting of additional colors with the four basic shapes.	
89		
90		
91		
92		
93		

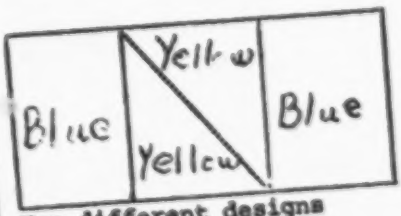
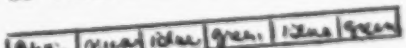
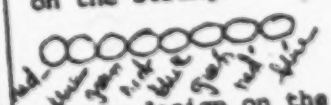
Symbol	Task	Additional Comments
94	Additional boxes were made to reinforce the sorting of additional colors with the four basic shapes	
95		
96		
97		
98		
99		
1A	Find all the big objects in the box and put them into a pile.	Box should contain: 2 of same object such as 2 glasses, 2 cups, 2 triangles, 2 rectangles.
2A	Find all the little objects in the box.	Use same kind of sets as in 1A.
3A	Put the big and little circles in the box on a matching card.	8 circles of 2 sizes are used all of which are the same color. The child is told to match them to a matching card.
	Squares 4A - 15A boxes. The boxes should contain matching cards which follow the following sequence and child is instructed to complete a matching card designed in a matrix format as follows. 	
4A	1 shape, 2 sizes, 1 color.	
5A	same shape, 2 sizes, 2 colors.	
6A	same shape, 2 sizes, 3 colors.	
7A	2 shapes, 2 sizes, 1 color.	
8A	same 2 shapes, 2 sizes, 2 colors.	
9A	same 2 shapes, 2 sizes, 3 colors.	
10A	3 shapes, 2 sizes, 1 color.	
11A	same 3 shapes, 2 sizes, 2 colors.	

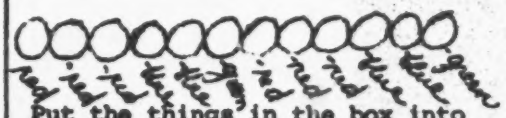
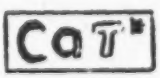
Symbol	Task	Additional Comments
12A	same 3 shapes, 2 sizes, 3 colors.	
13A	4 shapes, 2 sizes, 1 color.	
14A	same 4 shapes, 2 sizes, 2 colors.	
15A	same 4 shapes, 2 sizes, 3 colors.	
16A	Put the objects in the box into a row that goes from smallest to largest.	Use such things as pink tower from Montessori.
17A	Put the objects in the box into a row from largest to smallest.	Use cut out squares of about 5 different sizes or use dolls that vary in size only. 
18A	Find a picture in the box that looks the same as the one on the card.	Pictures can be taken from any old reading readiness workbook in which one picture is taped on the direction card, 3 other pictures are placed in the box one of which is the same as the one taped on the card.
19A	Same as 18A	
20A	Find the picture in the box like the one on the card. Given: 3 cards:	Abstract symbols are used in the next ten boxes. Three 3" x 5" oak tag cards are placed in the boxes as well as a design that is drawn on the direction card. Tops of 3 cards should be marked* so as to avoid improper viewing of the picture.
21A	Given: 3 cards:	

Symbol	Task	Additional Comments
22A	Given: 3 cards:	
23A	Given: 3 cards:	
24A	Given: 3 cards:	
25A	Given: 3 cards:	
26A	Given: 3 cards:	
27A	Given: 3 cards:	

Symbol	Task	Additional comments
28A	Given: 3 cards:	
29A	Given: 3 cards:	
30A	Given: 3 cards:	
31A 32A 33A 34A 35A	Find the card in the box that has the same letter as the one on the direction card. Given: A 	Each box contains 1 given letter written on card, and 4 cards containing reversals and inversions of the given letter. *indicates top of card.
36A 37A 38A 39A 40A 41A 42A 43A	Find the card in the box that has the same letter as the one on the direction card. Given: A, or B, or C, etc.	Each box contains 1 given letter and 4 cards containing reversals and inversions of the given letter.

Symbol	Task	Additional Comments
44A		
45A		
46A		
47A		
48A		
49A	Same as 36A - 43A	
50A		
51A		
52A		
53A		
54A		
55A		
56A		
57A		
1B	Tell the name of the letter on the card.	Letter A is written on a card. Child is asked to name the letter. He then traces it with his fingers as he says it.
2B	Trace the letter on the plastic sheet in the box.	Child is given an acetate sheet on which is written a letter A. Child uses crayon and traces the letter.
3B	Put the puzzle together to form an A.	Four puzzle pieces are put in the box. Child puts them together to form letter.

Symbol	Task	Additional Comments
4B	Write the letter A on the plastic sheet in the box.	Child is given clean plastic sheet and is instructed to write letter from memory.
5B	5B and following B Boxes - Each letter is included in the box series. Each letter should have four boxes to reinforce letter. Follow same series as outlined in 1B -- 4B.	
1C		
2C		
3C		
4C	Make a picture with the blocks like the one on the paper.	Use parquetry blocks to reproduce a drawn pattern on a card.
5C		
6C		
7C		
8C		
9C		
10C	Use different designs 2C - 10C	
11C	Which block should come next to finish the picture. 	Child sees a drawn pattern in the box. He then selects from 2 (3-D)blocks in the box to complete the design. 1 block blue, 1 green.
12C	Which bead should come next on the string: 	Child is given a string of beads on which there is an obvious pattern. Child must pick correct loose bead and put it on the string.
13C	Make a design on the empty pin board like the one in the box.	Design is made on a pin board and put in box. Child then makes a design on the empty board just like the one in the box.
14C	Same as square 13C box. Design:	

Symbol	Task	Additional Comments
15C	Same as square 13C box: Design: 	
16C	Make a shoestring design like the one on the card in the box. 	Child is given design drawn on paper. He is asked to reproduce it using a shoestring in the box and the exact number of beads.
1D	Put the things in the box into groups that are the same.	Materials include: 6-blue bathroom tiles 20-various colored plastic animal shapes from Dick Blick Children can sort by color, or shape. After they have sorted one way, simply ask them to sort a second way, show them.
2D	Put the things in the box into groups that are the same.	Same kinds of materials as square 1D above.
3D	Put the things in the box into groups that are the same.	6-black checkers 6-red checkers 6-red template knockout 0's 6-blue template knockout 0's 3-blue template knockout ⊏'s 3-red template knockout ⊐'s 3-green template knockout △'s 3-red template knockout △'s
4D	Put the things in the box into groups that are the same.	12 counting chips 6-red plastic apples 2-yellow stars 3-white rabbits
5D - 15D	Put the felt letters on the sandpaper ones.	Word is cut out of sandpaper and glued onto 5" x 9" oak tag card-same letters are cut from felt and placed loosely in box. Child picks up felt letter and places it on sandpaper.
5D	c a t	
6D	b o o k	
7D	c l o c k	
8D	b i g	

Symbol	Task	Additional Comments
9D	s e e	
10D	m a t	
11D	h a t	
12D	l o o k	
13D	w i n d	
14D	s a i d	
15D	u p	
16D	Make a design with the tiles, like the one on the paper in the box.	Child is given a picture with various colored squares in it. Blue | Red | Blue Yellow | Green | Yellow Blue | | Red Child uses colored bathroom tiles to reproduce the pattern, at first on the pattern, and then beside it.
17D	Make a design with the blocks in the box like the one on the paper.	Given a 2-D drawing which is color coded, the child can reproduce the drawing by using the actual object of the same color.
18D	Find all the capital A's in the box.	Various capital A's from various media are placed in box with about 6 other letters. Child is to pick out all letters that are named on the card.
19D	Find all the little a's in the box.	Same as above but with little a's.
20D		
21D		
22D		
23D		
24D	Same as square 18D and 19D above using the other letters of the alphabet.	

Symbol	Task	Additional Comments
25D		
26D		
27D		
28D		
29D		
30D		
31D		
32D	Same as square 18D and 19D above but using the other letters of the alphabet.	
33D		
34D		
35D		
36D		
37D		
38D		
39D		
40D		
41D		
42D		
43D		
44D		
45D		
46D		
47D		
48D		
49D		
50D		
51D		
52D		

Symbol	Tasks	Additional Comments
52D		
54D		
55D		
56D		
57D		
58D		
59D		
60D	Same as Square 18D and 19D above but using the other letters of the alphabet.	
61D		
62D		
63D		
64D		
65D		
66D		
67D		
68D		
69D		
70D		

Tactile Perception

Symbol	Task	Additional Comments
1	Find all the smooth things in the box. Find all the things that are rough.	Materials include corduroy, sandpaper, silk, bark, brillo pads, paper, lava soap, velvet, glass, marble.
2	Find all the soft things in the box. Find all the hard things.	cotton, coal, sponge, rock, block of wood, foam rubber, kleenex, feather, wood, velvet.
3	Find all the rough materials in the box.	corduroy, sandpaper, velvet, silk, dotted swiss. Child is blind folded to rely solely on tactile sense.
4	Find all the smooth material in the box.	Same material as in rectangle 3 above. Child is blind folded to rely solely on tactile sense.
5	Pick out a piece of material and find another piece in the box just like it.	Same material as in rectangle 3 include 2 of each kind of material. Child is blind folded and selects a piece of material from the box. He then finds another piece that feels like the first.
6	Pick out a shape in the box and find another one that feels just like it.	2-triangles template knockouts. 2-rectangles template knockouts. 2-squares template knockouts. 2-circles template knockouts.
7	Pick out a circle and find another of the same size.	Box includes 2 large circles and 2 small circles. Child is again blind folded.
8	Pick out a square and find another of the same size.	Box includes 2 large squares and 2 small squares.
9	Pick out a triangle and find another of the same size.	2-large triangles 2-small triangles Child is again blind folded
10	Pick out a rectangle and find another of the same size.	2 large rectangles 2 small rectangles.

Classification Skills

Symbol	Task	Additional Comments
	Sort the things in the box that are the same shape.	Box includes: 3-red large circles 2-red little circles 2-green large circles 3-green little circles 5-squares 3-triangles
	Same as diamond using triangles.	Same materials
	Same as diamond using squares.	Same materials
	Same as diamond using rectangles.	Same materials
	Sort the things in the box that are the same size.	2-large circles 2-small circles 3-large squares 3-small squares 2-large triangles 2-small triangles 2-large rabbits 2-small rabbits
	Sort the things in the box that are the same color.	Box includes: 3-red Dick Blick plastic kangaroos 3-blue cats 2-green ducks 1-red circle 2-green buttons 1-blue crayon
	Find all the things in the box that are metal.	spoon glass belt buckle fork rubber band nail crayon
	Find all the things in the box that are glass.	drinking glass, cup, ash trays, glasses, paper plate, stocking, marbles, mirror, nail, screw, spoon, pencil.
	Find all the things in the box that are plastic.	plastic frame glasses, plastic animals, plastic magnetic letters, plastic magnetic numerals, plastic drinking cup, mirror, paper, cloth.

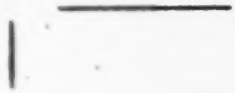
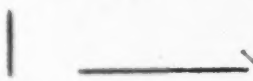
Classification Skills

Symbol	Task	Additional Comments
	Find all the things in the box that are paper.	paper cup, paper plate, sheet of paper, paper hat, clock, wood pencil, screw, crayon.
	Find all the things in the box that are wood.	wood, spoon, paper cup, wood beret, metal spoon, bark, plastic counters, paper plate.
	Find all the the pictures of things in the box that we can wear.	Magazine pictures of cars, clothes, shoes, ties, boxes, dishes, etc.
	Find all the pictures of things in the box that we can eat.	Magazine pictures bananas, cake, hamburgers, trees, plants, apples, etc.
	Find all the pictures of things in the box that are vehicles.	Magazine pictures of wagons, skates, cars, bus, boats, planes, trains, dishes, water, clay, food, clothes, wood objects.
	Find all the pictures of things in the box that will cut.	Magazine pictures of scissors, knives, razor, saw, ax, hatchet, clothes, food, paper plates, paper cups, etc.
	Put all the things in the box into groups that are the same.	Many objects should be included in these boxes so that child can classify using multiply criteria: shape - color shape - texture color - texture shape - material shape - size color - size shape - number color - number
		Materials may include such things as big corduroy circles, big red circles, small corduroy circles, small red circles, etc.

Auditory Skills

Symbol	Task	Additional Comments
	Find the dishes in the box that make the same sound.	Materials: 6 butter dishes - 2 of which contain sand, 2 contain beans, 2 contain rice. Child shakes the containers to find groups of 2 that make the same sound.
	Find the dishes in the box that make the same sound.	Materials: Same as above.
	Find the dishes in the box that make the same sound.	Materials: Same as above.
	Listen to the clapping on the card. Then repeat what you heard.	Clap is simple beat. Clap - clap - clap
	Same as but using a different rhythmic pattern which is clapped.	

Measurement Skills

Symbol	Task	Additional Comments
①	Find the short sticks in the box.	Materials: 3 sets of sticks. (cuisenaire rods) 1 set red (long and a short) 1 set yellow (long and a short) 1 set green (long and a short)
②	Find the long sticks in the box.	Materials same as square, circle ①
③	Find the stick in the box that is the same length as the line on the direction card.	Line is drawn on the direction card. The child is to find a stick in the box that is the same length as the line. (Use cuisenaire rods.)
④	Same as square, circle ③ but with different length line.	
⑤	Same as square, circle ③ but with different length line.	
⑥	Use the ribbon in the box to find out which line on the card is longer.	Two lines are drawn on card.  Child must solve problem of finding out which is longer by using a piece of ribbon that he can cut and superimpose over the two lines.
⑦	Same as square, circle ⑥	
⑧	Same as square, circle ⑥	
⑨	Use the rod in the box to measure the lines to see which is longer and which is shorter.	Materials: Lines are drawn on direction card.  Child takes a rod in the box and holds it beside one line and makes a mark on the rod to show length of first line. He then holds rod by second line to see if it falls shorter or longer than first line.

Symbol	Task	Additional Comments
(10)	Same as square, circle (9)	
(11)	Use the short rod in the box to measure the lines to see which is longer and which is shorter.	Same directions as for square, circle (9) except the child must step rod along lines to see which is more rod lengths.
(12)		
(13)		
(14)		
(15)	Same as boxes square, circle (1-11) except for width. Materials are same.	
(16)		
(17)		
(18)		
(19)		
(20)		
(21)		
(22)		
(23)		
(24)		
(25)		
(26)		
(27)		
(28)		
(29)	Same as square, circle (1-11) except height, materials are the same.	
(30)		
(31)		
(32)		
(33)		
(34)		

Symbol	Task	Additional Comments
	Find out which object in the box is heavier, which is middle size, which is lighter.	Use containers filled with various media such as stones, sand, etc. Child lifts it to determine which is heaviest, child checks himself by weighing it on a simple scale.
	Find out which object in the box is heavy, which is middle size, and which is light.	Same as square, circle above.
	Find out which objects in the box are heavy, which is middle size, which is light.	Same as square, circle above.

Quantitative Skills

Symbol	Task	Additional Comments
1	Put a tail on each kite.	6 paper kites 6 pieces are strings Child applies 1 to 1 matching for each.
2	Put a cup on each saucer.	6 baby doll cups 6 baby doll saucers
3	Put a ring on each finger on the hand.	Card board hand is cut out and 5 rings are put in the box. Child applies 1 to 1.
4	Put a clothes pin on each paper shirt in the box.	5 clothes pins 5 paper shirts Child applies 1 to 1.
5		
6		
7		
8	Repeat box circle, square with uneven sets of things (4 cups, 3 saucers). Child must tell which set has more.	
9		
10		
11	Count to 10.	
12	Count the objects in the box 1	Material: 1 apple
13	Count the objects in the box 1	Material: 1 plastic truck
14	Count the objects in the box 1	Material: 1 plastic flower.
15	Put one bead on the string in the box.	Materials: 1 string and 3 beads.
16	Count the objects in the box 2	1 baby football 1 bell
17	Count the objects in the box 2	1 plastic cat (Dick Blick) 1 plastic dog
18	Count the objects in the box 2	1 crayon 1 building block

Symbol	Task	Additional Comments
20		
21		
22		
23		
24		
25		
26		
27	Same sequence for numerals 3-10 as outlined in boxes 11 - 19 allowing 4 boxes for reinforcement of each numberal.	
28		
29		
30		
31		
32		
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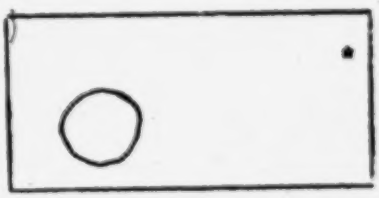
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		

Symbol	Task	Additional Comments
47	Same sequence for numbers 3 - 10 as outlined in boxes 17 - 19 allowing 4 boxes for reinforcement of each number.	
48		
49		
50		
51		
52	Make your string of beads look like the one in the box.	String of beads containing 3 red beads, 1 blue, 4 white. Child makes his look like one in the box by using loose beads.
53	Same as circle square 52 using different number of beads.	
54		
55		
56		
57		
58		
59		
60	Put 5 red beads on the string in the box.	1 shoestring, 7 red beads, 2 yellow beads.
61	Put 3 green beads and 2 yellow beads on the string in the box.	1 shoestring, 4 green beads, 5 yellow beads.
62	Put 7 blue beads and 5 brown beads on the string in the box.	shoestring 9 blue beads 7 brown beads
63	Same type of exercises that have preceded.	
64		
65		
66		
67		
68		
69		

Symbol	Task	Additional Comments
70, 71	Same type of exercises that have preceded.	
72	This numeral is one. Find all the 1's in the box.	Numeral 1 is written on the direction card. Child is to pick out all one's from box and say name of each as he gets it.
73	Trace the numeral one with a crayon.	Dotted numeral 1 is written on card and covered with clear contact paper. Child takes crayon and traces it.
74	Write the numeral one on the plastic sheet in the box and draw 1 thing in the circle.	Child writes numeral at top and draws picture in circle. 
75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92	Follow same sequence for each numeral up to 10 as outlined in 72-74	

Symbol	Task	Additional Comments
93 94 95 96 97 98 99 100 101 102	Follow same sequence for each numeral up to 10 as outlined in 72-74.	

APPENDIX D 1

Games and Learning Stations To Reinforce The Curriculum

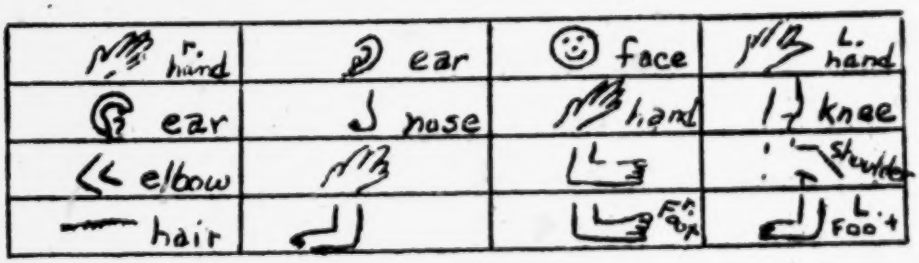
Teacher-Made Materials

Body Awareness and Gross Motor Skills

Similar to Twister Game (2 & 3 players)

1. Spinner Game and plastic sheet or large sheet of oak tag. Plastic sheet is lined off, with permanent paint, into squares large enough to place foot, hand, etc. Child spins the spinner which contains drawings of body parts - left hand, right hand, left leg, right leg, nose, ear, head, knees, etc. Child then names the body parts and finds it on the mat. He must then complete his turn by placing his body part on the correct position on the mat. If a child cannot place a body part on the mat because of the position he is in, he is out, or if he falls over so that the body part no longer touches the mat, he is out.

   Illustration:



   This game can also be used for visual discrimination skills.

2. Touch it, hold it: 4 or more even number of players.

   The children are grouped in two's for this game. A set of 32 oak tag cards are cut into 3" x 5". On each card is a picture of 2 body parts.

   This is an example. Many variations of body parts are used on 30 of the cards.

   Have one child from each pair of children draw a card. They must identify the body parts and then using the example above, one child takes his hand and places it against his partners head. The card must be put between the head and hand. This is continued from pair to pair, going round and round the room. Each turn a pair of children get they must do what the picture shows and still hold all the other cards of previous turns.

Two of the cards are blank. If a pair of children draw this card, they may drop all cards and start over again. If children who do not draw blank cards, drop them, they are out. The last team left holding all their cards is the winner.

3. A spinner is developed with pictures for run, hop, jump, crawl, walk. The child spins the spinner and then performs that action to a marked position (2 or more players).

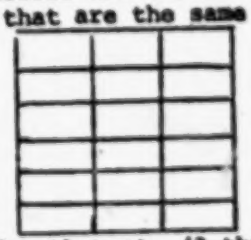
4. Listen and Act (3 players)

An "obstacle" course type of path is set up in the room. Each child is handed a set of 6 teacher pre-taped language master cards. He plays the card through the language master and then performs what he is told to do. The first child to complete his set of cards is the winner.

5. Set up obstacle course for all children to follow, varying tasks to be completed and varying width of space provided. Opportunity for skipping, climbing, running, walking, hopping, etc. should be provided.

6. Throw and hop. (2 or 3 players)

An oak tag board is lined off into blocks 3 across and 6 down. In each row of 3 blocks are drawn 2 pictures that are the same and one of which is different. The teacher hands the child a bean bag and tells the child to throw it either on a picture that is like another or to throw it on one that is different. For example, the first 3 blocks may contain a cat and 2 helicopters. The teacher tells the child to throw on the one that is different. The child then aims for the cat. (3 throws are provided). The child then hops over that row of pictures onto the 2 pictures that are the same in row 2, 3, 4, 5, 6. He then turns around and hops back naming the pictures that are the same, as he hops back. When he lands back on row 2, he bends down and picks up the bag and hops over row 1. He continues as long as he does not step on a line, or miss the square into which he is told to throw the bag. The first person to complete all six rows is the winner. The game may be varied by having the child hop on only those squares that are not like the other two. Also used for visual discrimination.



7. Leopard spots (may be played on individual or team basis)

A large leopard is drawn on a piece of oak tag. Children are handed a small nerf ball, tennis ball, etc., that is wet and will leave a temporary spot. The child then throws the ball at a spot on the leopard. If he misses, no score is given, if he hits a spot, he gets a point. Team or individual with highest score wins.

Visual Discrimination Skills

8. **Find the one that looks the same.**

The child is given a set of cards on which has been pasted one of various objects such as leaves, buttons, coupters, pencils, etc. The child looks at a card and then finds an object in a box identical to the one on the card. Game may be used for individual reinforcement or in a relay setting.

9. **Electric Light** (Home made - not commercial)

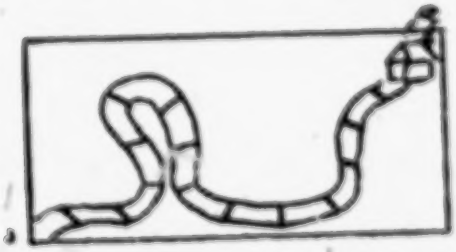
An electric board is wired to small flashlight batteries arranged in a row on each side of the board. Pictures are then placed by each light down one side. Identical pictures are placed in different order down the other side. The child finds the 2 pictures that are the same and connects the lights by wires running from a battery source. If the child is correct, the lights light up. Pictures may be frequently changed, working up to letter discrimination and word discrimination.

10. **Shape Up**

2 children sit facing magnetic board, but about 10 feet away. Sitting on the chalk ledge is a box containing magnetic circles, squares, triangles, rectangles. Behind the children, about 10 feet away are four empty chairs. On each chair seat is taped either a square, a circle, a triangle, a rectangle. The teacher tells each child a different shape. The children then run to the board, find their shape in the box and put it on the board. They then run, hop, skip, crawl, etc., back to the empty chairs and sit on the chair that contains their opponents shape. First one to complete task wins. This game can be adapted by having children draw shapes. Also use the game for letter identification, etc.

11. **Help put out the fire at John's House.**

A game board made from oak tag should be used for this game. On the board a path should be drawn like the following.



In each section should be drawn a shape, a letter, a word or whatever the game is to reinforce. Also at various points along the path various elements of chance should be included. Ex: fire engine had a flat tire, go back to start; ran out of water - lose one turn; ax needs sharpening, move up one space. (Pictures should be drawn on the board to accompany elements of chance)

The children use markers, to mark their place along the path. A large cube is used on which is drawn dots so that it resembles a large die. The child rolls the cube and counts the number of tots. He then moves that many spaces along the path. When he stops he must name the shape, letter, word, etc., that is written in the space. He also must obey the element of chance if any is in that space. If he cannot name the shape, letter, word, etc., that is in the space, he goes back two spaces. The game path should be changed frequently to center around important events at school or important calendar events.

12. Bingo with shapes, letters, numerals, or words, or pictures.

Bingo cards made from oaktag containing shapes, letters, numerals, words, etc. Game is played in the traditional way.

13. Climb the ladder and pick a fruit.

On a large piece of oaktag draw a tree and then draw a ladder up to the tree.

On each rung of the ladder and on each fruit is written a shape, letter, colors, words, etc. The first child on the team begins. He names the letter on rung one. If he is correct the team moves up one. If he is wrong, the team stays where they are, but a fictitious character such as a wolf, another child, etc., moves up one. The object is to get into the tree, pick as much fruit as possible, and then climb down again. If team gets most fruit, they win, if wolf gets the most, he wins.

14. Put spots on the leopard.

Similar to game 13 except two leopards are drawn without spots. Spots have been drawn, cut out, and shapes, letters, colors, words, etc., are put on each and stack of spots is put on chalk ledge under the leopard for each team. First child from each team runs up, picks up top circle, names what is on it, sticks it on the leopard and goes back to his seat. Game is played for predetermined period of time. Whichever team has most spots at end of time, wins.

15. Keep the tiger in the cage.

Tiger is drawn and cut out of oaktag and is taped on board. Over that is taped bars. The teacher holds a stack of cards containing the concept she wants to teach (colors, shapes, letters, etc.). She holds up first card. The first child tells her what is on it. If he is correct, nothing happens. If he misses, a bar is removed. The object of the game is to keep the cage there. Game may be reversed by having no bars up. Each child that gives a correct answer gets to put up a bar.

16. Steppingstones

Place large stone shaped pieces of paper on the floor. On each stone is written or drawn a color, a shape, a letter, a numeral, etc. To get across the river, the child must name what is on the stone. One miss and you start over, two misses and you fall in, so you're out of the game.

17. Bulletin Board - Mr. Smalls Tea Party - Mr. Big's Tea Party

Bulletin Board is divided into halves. On one side is Mr. Small's little table. On the other side is Mr. Big's table. In an envelope attached to the board are many pictures - one large and one small. The child is to sort them so that they are at the correct tea party. The backs of all of Mr. Small's things are color coded blue and Mr. Big's are red. When the child has finished, he turns everything over to check himself.

18. Help the girls find their slippers.

Draw one girl (little) on an overhead machine. Various other sizes of this girl can be drawn on oaktag by moving the overhead closer or farther from the board. The purpose of this is to assure that all girls have identical features except for size. Now cut the other girls out and arrange them in order from smallest to largest. Draw a pair of shoes for each girl, identical in all aspects, except size. Cut them out and tack them in random order on the feet of the girls. The student is to rearrange the shoes so that they are on the correct girl.

19. Adaptation of 9 except yarn is used to connect identical elements rather than current.

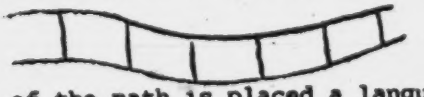
20. Make oaktag cards for each letter of the alphabet and make a thick magic marker letter on it. Cut the card into quarters and have the child put puzzle together following a given pattern that is placed in front of him.

21. Alphabet Tree:

Form tree on flannel board. Scatter leaves with letters, or numerals, or words on them in the foreground. Child chooses a letter, names it, and puts it on the tree. Child who puts up the most leaves wins.

22. Beat the wolf to Grandma's house.

Taped path is made on floor in classroom or drawn on oaktag.
Example:



In each part of the path is placed a language master card with a direction on it pertaining to the child's knowledge of numerals, or letter identification on any part of curriculum that needs to be reinforced. Child puts card through language master and does what

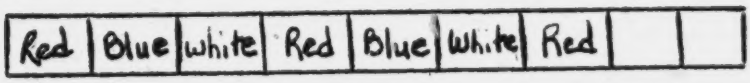
it says. If he does it successfully, he goes up one space. If he is unsuccessful, he goes back one space. Elements of chance should eventually be added to make the game more fun. When child is unsuccessful and goes back one space, the wolf advances one space. Object: To get to Grandma s before the wolf. Some directions include: Go to the board and write an "e". Name the letter on this card (f) What color is Mr. Bill's shirt?

23. Learning Center

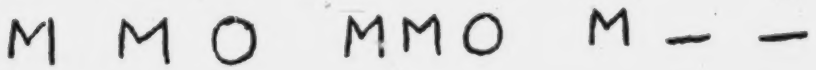
1, 2, 3, Finish Me

Patterns are mimeographed and placed in stacks on a table or bulletin board. The child must take a paper and complete it by coloring or drawing in the missing part. When complete he goes to an answer folder to check his answer.

Some examples:

A. 

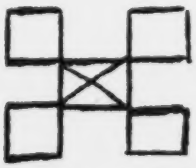
B.

C. 

24. Reproduce the following designs with blocks. (no color involved)

1.

3.

2. 

4.

25. Same type of drill as in 24 but pictures are colored and child reproduces the pattern using colored blocks.

26. Going Fishing

Fish are cut from language master cards on which has been taped different letters. Those same letters are then written on the fish. On each fish a paper clip is bent. The child is then given a fishing pole to go fishing. When he catches a fish, he names it and sends it through the language master to check if he is correct. The person catching the most fish wins.

27. Old Maids

Just like regular game, but using teacher made cards that contain the concept she wants to reinforce.

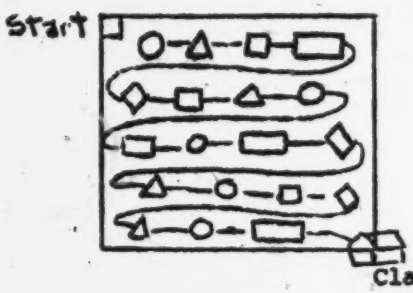
Tactile Perception

28. Mr. Feely Box

Make a large box filled with familiar objects; cup, spoon, ball, doll, pencil, sponge, etc. Child is blindfolded and sticks his hand in the box to identify, by touch alone, one of the objects.

29. Go Home

A game board is drawn on 24" x 24" oaktag like the following:



Shapes like the ones on the board are put in a bag. A marker for each player is put in the starting box. The child sticks his hand in the bag and by feel alone identifies the shape. He then finds the first shape like the one he picked on the path, on the board and puts his marker there. The first player to get home, wins.

Classification Skills

30. Put the things that are alike into groups.

Child is given a group of objects that can be grouped by shape, size, color, texture. Box should include template knockouts that have been painted various colors.

31. Put the things that are alike into groups. Box should include pictures and objects that can be classified on the basis of their use. To get the child started, put one of each kind of picture on a table.

Groups should include:

1. things we wear
2. things we eat
3. containers
4. vehicles
5. things that cut
6. tools
7. things to sit on.

32. Clapping Game

Children sit in a circle and begin clapping rhythmically very slowly. The teacher gives a category such as fruit. On each clap, the children each name a fruit. If a child misses his turn, he is out.

33. Picture hunt

Teacher names an object or a class of objects. The first child to find it in a magazine, cut it out and paste under a correct category in the front of the room is the winner.

Memory Skills

34. Concentration - 2 or more players

An oaktag board is constructed with 3 or more transparent pockets across and 3 or more transparent pockets down. Cards are then made, containing pictures, letters, shapes, colors, numerals, or words, and put in the pockets. The first child calls 2 numbers. The teacher turns the 2 cards over. If they are the same, the child tells what is on the cards and keeps the pair. If not the same, the cards are turned back over and the next player takes his turn.

35. Think

A regular check board is used in this game. The tops and sides of all red and black checkers are painted the same color, thus making it impossible to know which checkers are red and which are black, except by turning the checkers over. To begin, one player gets 6 black checkers and the other player gets 6 red. Chinese checkers are then played, trying to get the checkers to opposite ends of the board. Since all checkers look alike, memory plays a great part in this game. If a player suspects that another player has moved his checker, he may challenge. Upon looking at it, if the challenger is wrong, he loses his next turn. If he is right, his opponent loses his next turn.

36. Teacher prepares a ditto containing rows of visual stimuli. The children cover the ditto with a cover sheet while the teacher flashes for 6 seconds, one of the stimuli in row one up on the board. After waiting 10 or more seconds the children are then told to mark the correct picture in row one on their paper.

37. Memory Bingo:

Using U - film on which the teacher can make her own filmstrip, she prepares drawings of 10 things. She flashes them on the board one after another. She then hands out bingo cards which contain some of the 10 things and other foolers. She then calls out an object. If it was flashed on the screen, the children cover it if it appears on their card. First person to cover one row across or down, wins.

38. Vacation

First child starts by saying, I'm going on vacation and I'm taking a _____. The next child repeats what child one said and adds something and so on. Classification can be reinforced by making all children give answers that relate to a given class.

Example: Name only things that break; or you can eat, etc.

39. Going on a safari trip

Teacher or another child tells one of the children to go to the door or any other place in the room. On his way, he must pick up a pencil, touch the floor with his hand, and open a window. Child must do things in that order. If he doesn't, he is out.

Spatial and Locational Skills

40. Treasure Hunt

The teacher prepares maps of the classroom and indicates a hidden object by an X on the map. The child then follows the map, finding the hidden object.

41. Can you or can't you?

In different situations, objects are placed together so that the child must decide if he can get between them. If he says he can, he must try or he is out. If he says he can't, he must try anyway. If he can't, he stays in. If he can get between them, he's out.

Critical Thinking and Problem Solving

42. Red Light

The teacher states a situation with her back to the children who are standing in a row across the back of the room. If what she says is fantasy, the children must stand still. If she says a truth, the children may begin to walk toward the teacher. If she turns around at any time and catches a child moving, they must go back and start over:

Examples of statements: "The cow jumped over the moon."
"The cow looked at the moon."

43. Given a conglomeration of materials are mixed together. The child must sort it back into its component parts using various material that is given to the child.

Mixture may include sand, bolts, iron fittings, rice. He is given dishes to put parts in and a sifter and magnets.

Auditory Discrimination

44. Stop, Look, & Listen

Cards are placed randomly on the floor. Each card contains from 1 to 10 dots. The teacher beats on a drum (potato chip can) and a child must listen (blindfolded) to the number of drum beats.

He then removes the blindfold and finds the card that has as many dots as he heard.

45. Make containers with beans, rice, etc. Two containers must have the same materials and one contains a different material. Child shakes the containers to find the two which are the same.

Quantitative Skills

46. Bulletin Board

Ten felt circles cut out and the numerals 1 - 10 placed in the circles. Under the circle is stapled a small paper cup. The child must place as many sticks in the cup as the numeral indicates.

47. Same as above except dots 1 - 10 are placed inside the circles and the child must tack the correct numeral under its corresponding circles.

48. Quart size jar rings are hung by string from the ceiling. Over the hole is taped a piece of paper containing a numeral 1-10. The child is given a tennis ball to throw at the rings. Which ever ring he hits, he must name the numeral and he gets that many strikes toward a final score.

49. Ten Pins

Same as 48 above.

Basic Materials of Instruction and
Equipment for Class

Developmental Learning Materials
7440 N. Natchez Avenue, Niles, Illinois 60648

Weights 192A
Position in space posters, set of 24 #228
Sequential picture cards I #127
Sequential picture cards II #161
Sequential picture cards III #162
Sequential picture cards IV #242

American Packing and Display Corp.
6008 Quad Avenue
Baltimore, Md., 21237

Die Cut #3 cartons

David C. Cook, Elgin, Illinois 60120

49916 Mood and Emotions pictures

Houghton Mifflin, 53 W. 43rd St., New York, N.Y. 10036

Stern: Kindergarten Kit, complete classroom materials
manuals Nu 1-53651

Science Research Associates, Inc.
259 E. Erie Street, Chicago, Illinois, 60611

3-8400 Inquisitive Games, Discovering How To Learn,
Sprigle, H.S., Chicago 1969
3-8591 Inquisitive Games, Exploring Number and Space
Distar Language I, Teacher Kit 7-7700
Distar Language I, Student Set of 10 7-7720

Teaching Resources, 100 Boylstown St. Boston, Mass. 02116

81-120 Alike-Unalike strip books set of 8
81-130 Letter recognition strip books set of 8

Educational Division Meredith Corp.
440 Park Avenue, South
New York, New York 10016

Language Lotto
Matrix Games

Childcraft Educational Corp.
964 Third Avenue. New York, New York, 10022

2M230 Pegboard
2M232 Box of 100 pegs
22454 Set of 6 puzzles

Ginn and Co., Education Center, P.O. Box 2649
Columbus, Ohio, 43216

Reading 360 Level I Learning About Sounds and Letters

Follett Education Corp.
1010 W. Washington Blvd. Chicago, Ill. 60607

3586 Teacher's Guide for Frostig Beginning pictures
3591 Teacher's Guide for Frostig Intermddiate pictures and patterns
3530 Frostig - Move, Grow and Learn Program

Dick Blick, P.O. 1261, Galesburg, Ill. 64401

(A) P1107 Invicta Attribute Block Class Set #95001
(C) 1P1277 Desk to attribute blocks #95003
(C) 64600 Beads 1" diameter Box of 500
1P120 9 x 9 pin based on 2 cm. module #95953
1P749 16mm. Plastic counters #95107
1P750 16mm. Plastic counters #95108
1P768 20mm. Plastic counters #95109
B2198400 Letter number blocks
(D) 1P140 Basic shapes set by Sealey #95123
(A) Grouping and setting shapes 1P1175 pack of 36 shapes (misc.) #95015
1P1286 Grouping circles #95016

Constructive Playthings, 1040 E. 85th
Kansas City, Missouri, 64131

A640 Hi, Diddle Diddle
A642 Humpty Dumpty
A641 This Little Pig
A643 Little Boy Blue
A644 Mary's Little Lamb
A645 Old King Cole
Crayola #38 Large Size Primary crayons
Dixon's Beginners Pencils #308
510 Magnetic Capital Assort.
515 Magnetic Lower Case manuscript assort.
770 Alphabet Express
Tn193 Number Strip Book

Large Judy Clock
8039 Cubical Counting Blocks
530 Magnetic Primary Counting Shapes
520 Magnetic numberals
36001 The Peerless Chart

Pre-school Montessori materials are excellent for implementing the program.

Equipment:

Folkemer Photo Service
9041 Chevrolet Drive
Ellicott City, Maryland, 21043

Language Master 711 B

boxes of 100 cards each for above 3½ x 9 #072475

box of 100 cards 4 x 4 #072481

Childcraft Educational Corporation
964 Third Avenue, New York, New York, 10022

2F125 Hideaway storage cabinet
2B331 Set of 143 Childcraft table blocks
2C107 Childcrafts double adjustable blackboard easel
2R467 Rhythm Band Instruments (15)
1D246 Full length mirror
2B362 Nursery school set unit blocks - half set
2N536 Aquarium and aquarium kit

Rheem Califone Manufacturing Company
4518 Dresden Street
Kensington, Maryland, 20795

Cassette Tape Recorder, Rheem Cr-5
Listening station with earphones, Rheem HB 125B
Phonograph - Rheem 1450B

Kegel's, Westminster, Maryland, 21157

Cassette tapes - 30 minutes

AV Educational Products, 4 Dalebrook Drive
Phoenix, Maryland, 21131

Skill Master I with MCM Recorder
Boxes of 100 each standard 9 x 3 7/8 cards,
laminated L-39, for Skill Master I

Creative Playthings
P.O. Box 330
Princeton, New Jersey

NH 272 Screen

CURRICULUM

This curriculum guide has been developed for kindergarten children who have been diagnosed as having learning problems. The teacher of the Title III experimental class (Mr. William Pearre) wrote the preliminary guide during the summer of 1971 prior to the beginning of the class. Modifications were made in the curriculum as it was used during the school year. During the following summer (1972), Mr. Pearre, and two of the teachers assigned to begin teaching in other early intervention classes during the next school year made further revisions.

Each skill has been broken down by means of a task analysis. Needless to say, for some children the steps probably have not been broken down sufficiently, and refinement and restructuring of the task may be necessary.

The activities listed for each objective are by no means complete. The teacher may need to develop additional reinforcement activities. Where no activities have been supplied, it is felt that the activity is self-evident in the objective.

The kindergarten child will be exposed to additional activities in a school day other than a cognitive skills lesson. These would include a formal language activity, a creative expression period for art and music, some physical activity, snack, story time, a free play time, and reinforcement activities for skills already taught.

It is important to stress that this is a curriculum guide for developing cognitive skills and remediating weaknesses in the modalities. Science, social studies, and affective development objectives are considered important but are not covered in this guide. An excellent source for these areas may be found in the Carroll County Curriculum Guide for Kindergarten.

William Pearre
Teacher of Title III

Joanne Hay
Early Intervention Teacher

Linda Garber
Early Intervention Teacher

A Cognitively Oriented Kindergarten Curriculum Guide

Developed for

Early Intervention to Prevent Learning Disabilities
Title III Kindergarten

and

Carroll County Special Kindergarten Classes

Carroll County Board of Education
Carroll County, Maryland

Original Copy
1971

Revised
1972

Gross Motor Skills .....Page 1
Fine Motor Skills.....Page 10
Visual Discrimination Skills.....Page 16
Tactile Perception Skills.....Page 34
Formation of Sensory Images.....Page 36
Classification Skills.....Page 37
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Critical Thinking and Problem Solving.....Page 49
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Geometric Skills.....Page 68
Measurement Skills.....Page 71
Quantitative Skills.....Page 75

I. Gross Motor Skills

BEHAVIORAL OBJECTIVE	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
A. The child can move a single part of his body independently following a leader. (No verbal command)	Follow the leader Angels in the Snow	
B. The child can move more than one part of his body at a time, independently following a leader. (No verbal command)	Follow the leader Angels in the Snow Jumping Jacks	Inquisitive Games - Discovering How To Learn - (Herbert Sprigle) Human Body Activities - Activity 1 SRA
C. The Child can demonstrate the verbal term "point" by showing the part of the body (fingers) used for pointing.	Song - Where is Thumpkin	Music Skills for Classroom Teachers by Robert Winelow and Leon Dallin. page 228.
D. The child can point to familiar objects upon verbal command.	Point to the ceiling lights. Point to the cat Point to the dog, etc. Point to the clock.	
E. When the teacher points to a part of his/her body, the child can point to the same part of his body. (No verbal command).	Teacher and child stand side by side facing same direction looking in a mirror.	Mirror - full length by Childcraft
F. When the teacher points to a part of the body on a doll, the child can point to the same part of his own body. (no verbal command)		Doll Human Model Invisible Man
G. The child can perform F above when the teacher points to a part of the body on a picture (no verbal command)		
H. The child can perform E, F, G, above when the teacher verbally labels the body parts as he points to them.	One Finger, One Thumb-Song Head, Shoulders, Knees and Toes Tune "There is a Tavern in the Town" Head and shoulders, knees and toes. Repeat: An eye, an ear, a mouth, and	Music Skills for Classroom Teachers Page 229 "Inquisitive Games - Discovering How to Learn (Herbert Sprigle) Human Body Activities (Activity 2 - SRA)

BEHAVIOR OBJECTIVE	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
I. The child can point to body parts on himself without any visual cues.	Modified Simon Says. - include Simon Says in every verbal activity. 1.head 8.neck 15.legs 2.eyes 9.arms 16.knees 3.eyelids 10.shoulders 17.toe 4.nose 11.hand 18.elbow 5.mouth 12.wrist 19.ankle 6.ears 13.fingers 20.foot 7.hair 14.cheeks 21.torso 23. abdomen 24. eyebrows	
J. The child can point to parts of the body listed in I above on another person upon verbal command.		
K. The child can identify the body parts 1. Point to a part of the child's body listed in I above and have the child name it.	Have the child lie on a piece of paper and have someone else trace his body. Then the child will name body parts when pointed to and can point to body parts when names. (Save this drawn picture for activity listed in L7.	Inquisitive Games - Discovering How to Learn, Herbert A. Sprigle, SRA Human Body Activities Activity 3
2.Same as K1 above on another person	Children can do this with partners. Teacher is free to observe and evaluate.	
3.Same as K1 above on a doll.	Using teacher made pre-recorded tape of body parts, child will independently identify body parts.	
4.Same as K1 on a picture.	Use flannel board picture or manikin from Peabody Kit.	Peabody Kit-Level P.
5.Child can move the body part which is mentioned (as listed in I above.	Twister-using teacher made spinner and canvas. Child must name part to which he spins, locate it on the canvas, and put that part of his body in contact with picture on canvas.	

BEHAVIORAL OBJECTIVE	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
L. The child will develop a mental image of his body. (evaluate this by means of activity performance)	Game-Take Away Child sees a completely assembled body -(picture or doll) closes his eyes while teacher or peer takes one or more parts away and hides it. Child names the missing part or parts, then puts it back in its correct position.	Inquisitive Games SRA - Human Body
	Child can complete a body by drawing in the missing part: (omit facial features) 	Inquisitive Games
	NOTE: Stick figures have been used here only for conveyance of the idea. Do not use stick figures with the child.	
	Child will assemble a four part face puzzle into a whole. 	Use photograph, or old magazine picture for face puzzle.
	Child can complete a picture of a face by drawing in the missing features. 	Inquisitive Games - SRA Human Body Activity 7 Game 1.

Gross Motor Skills

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	Use body awareness games from SRA Inquisitive Games. Child will assemble pre-cut magazine pictures into a whole figure and paste them on paper. Using picture drawn in K1, cut into identifiable body parts to be assembled into a whole by the child. Child will draw or paint himself on paper from memory. Child can construct completed body by using modeling clay.	Inquisitive Games SRA Company
M. By following a leader who names and performs the action, the child can perform the following motor skills: 1. walk - at avrious rates, at an even pace copying a leader. 2. jump-landing simultaneously on both feet. 3. hop- on either foot. 4. run 5. skip 6. gallop 7. crawl 8. kick 9. grab 10. hold 11. touch 12. kneel 13. lift 14. pull 15. push 16. twist 17. nod head 18. bite apple 19. chew 20. blow nose 21. sniff 22. blink 23. wink 24. shut eyes	Games - Modified Simon Says as in I. Animal identification - child must select an animal and move like that animal. Jumping over a stationary rope. Jump over a swaying rope.	Other bought games. Inquisitive Games SRA related Activity 1, Mulberry Bush. Language Lotto by Gotkin Educational Division Meredith Corporation Matrix Games by Gotkin Positions in Space Posters by Developmental Learning Materials

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
N. Child can name the action above when performed by another person	Game-Charades Teacher whispers action to child. child performs action. children name the action.	
O. The Child can perform the action when another person names it.		
P. Upon being shown a picture of a person in a certain position, the child can assume the same position himself.	Use position in space posters. Game - Statues-one child is a statue and the others must assume his position. Game-Freeze-Upon freezing, the child is to identify his position with one of the posters.	Positions in space posters. Developmental Learning Materials.
Q. The child can walk, jump, hop, run and crawl in the following elaborated forms of movement by following a leader who says the direction in which the child moves. 1. backwards 2. sideways 3. various rates-fast, slow. 4. Move to a marked position.	Follow the leader. Child can pretend to be a crab for sideward movement. Game - Let's Take a Walk-Make up a story of a pretend walk. Children will stay in place but will move themselves in a fashion to resemble running, walking, jumping, hopping, and crawling when they are called for in the story. As the story proceeds, be sure to include directions listed under the objective. Game - Spinner a. Spinner Put pictures where words appear. b. Child spins and then performs that movement to a marked position and back.	Balance Beam for all reinforcement activity.

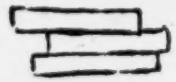
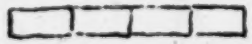
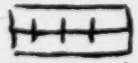
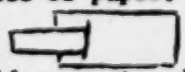
BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
R. The child can move in a verbally described direction without a model to follow.	Directions can be taped or given on the language master. The first child who gets to the end of an established path gets to pop a balloon, be first in line, etc. Game - Mother May I?	Language Master-Folkemer Photo Service.Tape Recorder
S. Child can alternate his limbs in performing the following movements after seeing a model. 1. Child can walk. 2. Child can climb stairs. 3. Child can beat out simple rhythms with hands alone, or feet alone. 4. Child can beat out simple rhythms with combination of all four limbs.	Set up a color coded path for use with feet movements. corresponding color should be placed on top of child's shoe. Red Square Red Square Tom-Toms Simple Dance patterns	Tom-Toms (Old potato chip cans)
T. Child can repeat S above without seeing a model.		
U. Child can perform simple rhythmic patterns using rhythm instruments.		Rhythm instruments
V. The child can control his body in space. 1. Given a path defined by 2 rows of benches, the child can move along the path without touching sides.		Obstacle course.

BEHAVIORAL OBJECTIVE	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
2. Given ten pins or blocks of wood set up with some space between them, the child can walk between them without knocking them over.	Set up ten pins in a pattern like the one shown. 0 0 0 0 0 0 0 0 0 0	Bowling pins.
3. Given a path defined by two taped lines on the floor, the child can move along the path without crossing over the line.		
4. Given an obstacle course involving climbing, crawling, and other movements, the child can: a. move through it copying a leader. b. move through it following verbal directions.		
5. The child can verbally judge the distance that he will need to move through a path.	Set up two chairs, back to back. The child can tell the leader how far they have to be apart before he (the child) can walk between them.	
W. The child can stand. 1. The child can stand when shown a model. 2. The child can do W1 above without a model. 3. The child can balance himself by standing on one entire foot when shown a model. 4. The child can do W3 above without a model.		

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
5. The child can stand on his toes using one foot when shown a model. 66. The child can do W-5 above without a model. 7. While balancing on one foot, the child can raise or swing his other foot. 88. Child can walk a straight line taped on the floor using a normal walking pattern. 9. Child can do W-8 above in a heel to toe fashion. 10. On a balance beam with a wide walking surface, the child can move forward or backward, or sideways. 11. Same as 10 above using a thinner walking surface.	Kicking objects.(e.g. balls, etc.)	Taped straight line on floor. Balance beam with a wide walking surface. Balance beam with thinner walking surface.
X. The child can throw an object.	Balls, beanbags, etc.	Balls, beanbags, etc. hand knitted balls.
Y. The child can throw an object at a target which decreases in size as skill increases.	throw at the entire wall. throw at the blackboard on the wall. Throw at 1 section of blackboard. Throw at a circle drawn on blackboard.	Objects to throw 1. 8½"rubber playground ball 2. 10" rubber playground ball.

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
Z. The child can throw an object at a target which remains constant in size while the distance to the target increases.		Different shaped targets
AA. The child will catch a large object with both hands when thrown to his at a close range.	balloon beachball Use objects which give child time to position himself.	Nerf ball Balloons Beachball
BB. The child can catch large objects which are heavier and, therefore, travel faster.	Playground balls.	
CC. The child can catch objects which decrease in size.	Tennis balls Jack balls	
DD. Repeat AA, BB, CC, at greater distances.		

II. Fine Motor Skills

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
A. The child can put objects of various shapes into correspondingly shaped holes. (Visual discrimination not important at this time.)	Tupperware Shape-o toy Montesseri Depth Cylinder Perceptual Learning Puzzles by Gotkin	Tupperware Company Brault and Beuthillier LtEE, Canada Educ. Div. Meredith Corp.
B. The child can stack objects. 1. The child can stack large, flat, square blocks into a tower without alignment. 2. The child can stack cubes into a tower without alignment. 3. The child can stack rectangular blocks into a tower without alignment.		Perceptual Learning Puzzles by Gotkin Educational Division, Meredith Corp. Softwood Kindergarten Blocks Beckley-Cardy
C. The child can align blocks or cards in trains.		Softwood Kindergarten Blocks
D. The child can align the marks on premarked objects.	The child can align two rods so that the marks on each of them are lined up.  The child can place a rod so that one end is at a mark on a piece of paper.  The child can set a dial to a premarked position.	Softwood kindergarten blocks

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
E. The child can repeat B1,2,3, so that the edges are aligned.		Softwood kindergarten blocks.
F. The child can use one hand to hold an object in place while the other works as in hammering, drawing.		
G. The child can thread objects. 1. The child can string spools onto a thread. 2. The child can string beads onto a thread. 3. The child can complete a punched sewing card. 4. The child can lace his shoes.		Spools Beads Sewing cards. Shoes
H. The child can tie his shoes. 1. The child can grasp the two strings in pincher like movements using the thumb and pointing finger of each hand. 2. The child can cross the two strings and grasp opposite. 3. The child can Tuck the end of string in his right hand down through the opening formed by the two crossed strings. 4. The child can pull tightly on the en ends of the strings. 5. Fold the string in your right hand in half and hold the bottom of it together. Loop is formed at the top. 6. The child can take the string in his left hand and wrap it under the loop and go half way around, making a circle around the right index finger.		

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
H.7. The child can take the left thumb and push the string that went around the finger through the hole which contains the right pointer finger. H.8. The child can grasp the string that his left thumb is pushing with the right thumb and index finger and pull. (CHILD SHOULD NOT BE MADE TO KNOW LABELS OF LEFT AND RIGHT) Instead he will be able to do this sequence by constant repetition and practice.		
I. The child can use work tools.	Hammer on pegs. Hammer on nails that have been started. Pliers to pull out nails. Screwdriver to turn a screw. Wrench to loosen or tighten nuts and bolts.	
J. The child can operate fasteners and locks.	buttons snaps zippers key locks door knobs screw jar tops	
K. Child can pour materials from one container into another identical container. 1. Child can pour course materials such as beans and rice. 2. Child can pour fine materials such as sand, sugar, salt. 3. Child can pour liquids.		Plastic butter dishes lima beans Aluminum Sand Cans sand plastic butter dishes Water, Lemonade, milk (for snacks)

Fine Motor Skills

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
L. Repeat K using variously shaped containers.		
M. Repeat K by pouring the materials into variously shaped containers up to a marked line.		
N. Child can tear paper.	Give child large piece of construction paper. He is to tear it into vertical and horizontal lines and paste the paper into a collage. Child tears construction paper into small pieces and pastes them into a mosaic arrangement. Have the child tear out a shape that resembles an object in his environment. e.g. animals, houses, people, etc.	Construction paper, paste.
O. The child can use scissors properly. 1. Child can cut paper in any fashion. 2. Child can cut paper into strings. 3. Child can cut on a straight line marked on paper. 4. Child can cut large free shapes-not from patterns.	Scrap table where child can come and cut freely and make his own picture. Have the child weave his strips into a mat. Have child weave his strips into a basket. Child can cut pictures along a straight border, and then paste pictures into a collage.	scissors

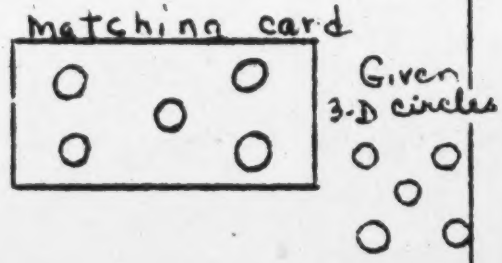
BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
F. Child can use, properly, tools for writing. 1. The child can hold a primary crayon or a primary pencil properly and can mark on paper. 2. Child can trace a straight line. 3. Child can draw a line, staying inside the boundaries, of a straight path. 4. Child can trace a straight lined template pattern. (geometric shapes made of straight lines.) 5. Child can trace a curved single line path.	First experiences will be free play scribbling with no particular subject. Use verbal stories that accompany worksheets. The child will trace a path to a given destination. Worksheets Use worksheets where first the child will be able to trace a curved solid line. Then use a broken curved line. Then a dotted curved line.	 Frostig Developmental Program in Visual Perception - Beginning Pictures Follett Company Templates from Winterhaven Continental Press- Visual Motor Skills Level 1 pp. 1, 2, 3, 4.
6. The child can draw a curved line in a path defined by boundaries.	P.G. 	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
7. The child can form a curved shape by tracing a template (geometric shapes defined by closed lines.)		
8. The child can trace simple pictures.	P.8. Have the child trace on the overhead projector, simple pictures such as cat, ball, stars, etc.	

III. Visual Discrimination Skills

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
A. Child can discriminate likenesses and differences in concrete objects. 1. Child can tell when two objects are the same.	All these activities may be reinforced by taping directions on Language Master Cards. A.1 The teacher will show the child two identical objects (such as 2 pencils, glasses, cups, etc.) Have the child identify the object by name. The teacher will state that: "These two objects are the same" Have the child repeat the sentence with you. Pick up one glass at a time and say, "This glass is the same as this glass." Have the child repeat the above statement with you. **Repeat with as many sets of objects as you feel necessary for each particular child. A.2 Show child sets of two objects and have him tell if they are the same with a yes or no answer. Be sure to include some sets which are different-expect a statement such as: "No, they are not the same." It may become necessary to build a pattern of verbal responses by asking a question and then saying the answer so that the child knows what is expected of him.	Language Master by Folkmer Photo Language Master cards by Folkmer Photo Service. A.V. Equipment Teaching Resources Corporation Find-a-Pair Cards Cheves Form Puzzles Shape Analysis & Matching cards Alike/unalike strip books Look Alikes

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	A.3 Given one object-the child can find the object that is the same in an assortment of objects. A.4 Set up 4 objects, 3 of which are the same and 1 which is not the same Sing the Sesame Street Song - One of these things is not like the others. One of these things is not like the others. One of these things doesn't belong. Can you guess which thing is not like the others by the time I'm finished my song? Have the child tell you the one which doesn't belong. **Make sure that many of reinforcement activities are available for the children.	
2. The child can tell when two objects are not the same.	B.1 Follow the same sequence as in A above, but use words "not the same" B.2 Given sets of two objects, the child can state whether they are the same or not the same.	
3. The child can state likenesses and differences in terms of alike and not alike. 4. The child can state that two objects are different (not the same)	C. Follow same sequence as outlined in A above first, using the new term alike. Then repeat sequence B above using the new term not alike. D. Follow the same sequence as in A above.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
B. The child can discriminate objects by shape, or color, or size, or any combination of shape, color, or size. Given a 3D circle, the child can name it.	Have the child trace the shape of a circle with his fingers and talk with the teacher about its characteristics. (If it is a rectangle or square, as introduced later, have the child measure the sides with yarn so that he can see whether all sides are the same length. Tell child, "This shape is a circle." and have him repeat it. Show the child a circle and have him tell you its name. Have the child match 3-D circles which are the same size and color to circles drawn on a matching card. Each time a child picks up a circle, have him name it by saying "This is a circle." Do the same when he matches it on the matching card.  	Attribute Blocks - Dick Blick Co. Various colored animal shapes by Invicta could be used throughout this section. Template Knock-outs of various shapes will be used throughout this section. Winter Haven Lions Research Foundation, Inc.

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	Have child sort all circles from a group of objects Have child locate circles in room. Game - Play like Fish. Three circles wins. Find circles in magazine pictures.	
2. Given a three dimensional square, the child can name it.	Follow same sequence as in A1-7. (Fish can include circles and squares) Sorting box with circles and squares.	
3. Given a three dimensional triangle, the child can name it.	Follow sequence for A1-8 and B2 include triangle in sorting box.	
4. Given a three dimensional rectangle, the child can name it.	Follow same sequence as in A1-8, B-2 include rectangle in sorting box. Bingo with shapes. Have pre-cut shapes for child to paste into an original picture. Assign an activity to a shape, such as standing up for a square, clapping for a circle, sitting for a triangle, stomping foot for a rectangle. Beginning with two shapes in a row, child is asked to read symbols from left to right and carry out assigned activity. Work up to all four shapes.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
5. The child can discriminate and name the color red from an assortment of colors.	Give child a matching card with 4 red circles and one circle of another color and 4 loose red circles and one of another color. Have him match the loose circles to the cards. All circles should be same size.	
	Give child several red circles and one of another color. Say, "This circle is red" Now have the child repeat sentence with you. As you point to odd circle say, "This circle is not red".	Record Hop Palmer, Learning Basic Skills Through Music, Vol. 1
	Have several red circles and some of other colors on a table. As you say, "Point to the red circle", have child do it until he has found all of the red circles.	
	Put an assortment of colored circles on table. (Include several red ones) Have child sort out all of the red circles.	
	Give child a red circle and ask him to name color.	
	Using the red circle from 5 above as a guide, have child find other things in room that are red.	

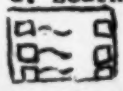
BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	Ask child to find red things in the room without a guide. Make a red book by cutting red pictures from a magazine. Have child point to or draw something that is red. Game - Steppingstones a. Place large stone shaped pieces of paper on floor - many of which are red. b. Have child pretend that stones are in water and to get across the water he can only step on the red stones. Begin by having child sort 2 shapes which are all red and work up to a point where child can sort all 4 shapes that are red.	
6. The child can discriminate and name the color blue from an assortment of colors.	Follow same sequence as outlined in E 1-10 above.	
	Given three dimensional objects which are all the: a. same shape (circle) b. same size c. two colors (red-blue) child can match them on a matching card.	
	Given three dimensional objects which are all the: a. same shape (circle) b. same size c. two colors - (red-blue) (cont.)	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	(cont.) Have the child sort them into groups of red and blue.	
	Repeat F2 and F3 with a square	(In activity 4-9 child has two ways of groupings; by shape or by color)
	Repeat F2 and F3 with a triangle	
	Repeat F2 and F3 with a rectangle	
	Repeat F2 and F3 with a circle and a square	
	Repeat F2 and F3 with a circle, square,& triangle,	
	Repeart F2 and F3 with a circle, square, triangle, and rectangle,	
7. The child can discriminate and name the color yellow from an assortment of colors.	Follow same sequence as outlined in E 1-10 Given three dimensional objects which are all the: a. same shape (circle) b. same size c. three colors - (red-blue-yellow) the child can match them to a matching card. Given three dimensional objects which are all the: a. same shape (circle) b. same size c. three colors (red-blue-yellow) have child sort them. Repeat the activities using one shape and 3 colors at a time. Work up to 4 shapes with 3 different colors.	Teaching Resources, Erie Part I Visual Perceptual Games

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
From this point on it will be the teacher's job to introduce the rest of the basic colors, one at a time, as outlined in E 1-10 and to have the child use these colors as introduced along with the shapes in several sorting and matching activities as in F 2-9. Where possible, the child should be allowed to experiment to discover the secondary colors by using paint, color paddles from Lake Shore, food coloring, etc.)		
8. The child can complete a simplified matrix set up by the teacher.	The child can: 1. close his eyes while the teacher removes a part and the child can tell which which part is missing. 2. replace the entire second row of blue shapes when they have been picked up by the teacher after the child has seen them. 3. put certain parts of the matrix in which have not been placed by the teacher 4. group the parts of the matrix, himself, which go together. (note: He may group in any way he wishes)	
The child will be working up to a point where he can use the three primary colors and the four basic shapes in a matrix format.		

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
9. Child can compare 2 objects stating whether they are big or not big.	Place in front of child sets of 2 objects (2 glasses, 2 cups, squares, rectangles, triangles, circles) each containing big and not big items. Point to the big items in each set and say, "This _____ is big." Have child repeat with you. Point to the not big item and say, "This _____ is not big. Have child repeat with you. Using same sets as in I 1 above, have the child point to the one that is big in each set and say "This ____ is big." Using same sets as in I 1 above, have child point to the ones that are not big and say, "This ____ is not big." Mix all sets of objects from I 1 above and have child sort them into a group which is big and a group which is not big.	
10. Child can compare 2 objects stating that those objects which are not bit, but are little. (Note: At teacher's discretion, he can introduce the terms small or large.)	Follow same sequence as in I but supply the word little instead of not big. Given three dimensional shapes that are all the: a. same shape b. 2 sizes (big-little) c. 1 color the child can match them to shapes drawn on a matching card. - These drawn shapes are: (1) same shape (2) 2 sizes (3) 1 color	Perceptual Learning Puzzles by Gotkin

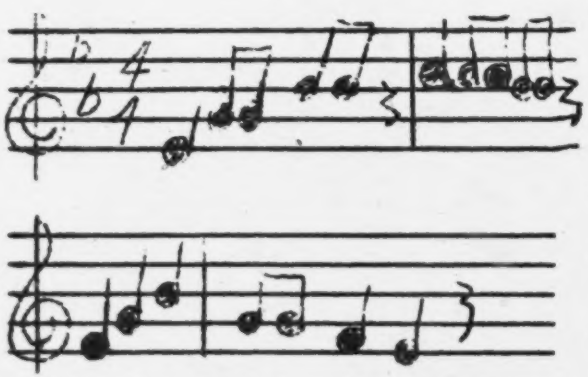
BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	Repeat the above activity for each shape using the following pattern. 1 shape, 2 sizes, 1 color same shape, 2 sizes, 2 colors same shape, 2 sizes, 4 colors Repeat for different shapes 2 shapes, 2 sizes, 2 colors. same 2 shapes, 2 sizes, 2 colors. same 2 shapes, 2 sizes, 3 colors. Repeat for combinations of all shapes. 3 chapes, 2 sizes, 1 color same 3 shapes, 2 sizes, 2 colors. same 3 shapes, 2 sizes, 3 colors. 4 shapes, 2 sizes, 1 color same 4 shapes, 2 sizes, 2 colors same 4 shapes, 2 sizes, 3 colors.	
11. Child can work with and complete a more complex matrix format set up by the teacher.	Upon constructing a matrix for the child: R - B - the child can: a. close his eyes while the teacher removes a part of the matrix and the child can tell which part is missing. b. construct one of the rows himself. c. fill in various parts that are missing. d. construct the entire matrix himself.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
12. The child can construct an entire matrix by himself.	Child can construct a matrix in following instances: a. 4 shapes, 2 sizes, 1 color b. 4 shapes, 2 sizes, 2 colors c. 4 shapes, 2 sizes, 3 colors d. 4 shapes, 2 sizes, 4 colors. (note) It may be necessary for the teacher to begin setting the format for the matrix.	
13. Given objects in a series of sizes the child can seriate them from smallest to largest.	a. 1 shape - 1 color on a matching card. b. series of 2 sizes in 1 shape and 2 colors on a matching card. c. series of sizes in 1 shape and 3 colors on a matching card. d. series of sizes in 1 shape and 4 colors on a matching card.	Perceptual Learning Puzzles by Gotkin.
	Child can repeat M 1-4 above without a matching card or for form to follow.	
14. Child can repeat M above in reverse order of size from largest to smallest.		
C. Child can discriminate likenesses and differences in pictures, by stating whether they are the same or different.	a. Given 3 large pictures the child can state which 2 are same or which one is different. b. Given a picture, the child can find another picture just like it from a group of pictures. c. Game - Bingo Make a spinner with pictures on it; make bingo cards that consist of pictures the same as on the spinner. The leader spins the spinner and children place a marker on the picture if they have it. First person to cover one row wins. d. Learning center -  ☐ are pictures. The second row contains the same pictures as the first, but in different order.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	Game - Hop Scotch Make a hop scotch board containing rows of two of the same pictures and one which is different. D S S S S D S D S S - same D - different First child hops along board on two feet jumping on pictures that are the same and naming the pictures. If child steps on a line, he is out. Second child hops on one foot on picture that is different. Play game again, throwing bean bag on picture that is different.	
D. Child can discriminate likenesses and differences among abstract designs. (e.g.)	Use same type of activities as listed in C above.	Flex-Ed and 201R Discrimination pages by Educational Innovations, Inc.
E. Child can discriminate likenesses and differences among letter configuration.	Use same type of activities as used in abstract designs. Be sure to begin with letters that have gross differences and work to those that have fine differences.	Visual Discrimination Practice Pad, by Stanchfield (Stone Educational Publications)
F. Child can tell the letter name when shown a letter.	Activities will vary according to the modality strength of the child you are working with.	1. Sandpaper letters 2. Felt letters (Instructo) 3. Fingerpainting 4. Slingerland Method 5. Listen and Do 6. Talking Alpha bet 7. Clay letters 8. letters in rice and sand 9. Carved letters in wax 10. Use four piece puzzle part and have child reproduce a (cont.)

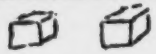
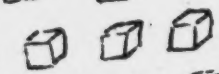
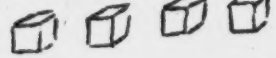
BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
		given letter puzzle pattern. 11. Instructor, Magnetic Lower and Upper case letters.
	a. When given a pattern with a string of beads or a set of blocks arranged in a straight line, the child can determine which bead or block would come next to extend the pattern. b. When given a pattern with a string of beads or a set of blocks arranged in a straight line, the child can make a copy by placing the beads or blocks in exactly the same order. c. When given a pattern on a geoboard, the child can reproduce it exactly on his board. d. When given a matrix with various objects in the cells, the child copies the matrix using a second set of objects.	beads blocks geoboard
	In letter recognition, introduce capital and lower caseletters together even though there may be a few days difference in the introduction period. In teaching letter names to children who do not know the alphabet, it is suggested that the sequence used in Getting Ready to Read, be followed.	Getting Ready To Read Teacher's Edition Houghton Mifflin

Visual Discrimination Skills

BEHAVIORAL OBJECTIVE	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	1. Letter March - Hand out letter cards. Children march, skip, or walk to music as their letter is called out. 2. Hide the Letter - Put four letters on the chalkboard. One child is "It" and stands near the letters. Four children come to the board and look at the letters and then turn away. The child who is "It" removes a letter and says "ready". The four children turn, and the first one to call out the missing letter is "It". Four new children come to play. 3. Ten Pins - Put letters on bowling pins or empty plastic bottles. The child who bowls must name the letters on the pins he knocks down. His score is the number of letters he names. 4. Alphabet Riddle - "I have a riddle, I have a riddle. Do you know what letter I am?" "I know your riddle, I know your riddle. It's the letter capital ____ small ____." The child who sings the riddle holds a letter card so all may see. Another child answers and names the letter.	Learning Basic Skills Through Music Vol. 1 by Hap Palmer

BEHAVIORAL OBJECTIVE	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	5. Alphabet Tree - Use yarn to form a tree trunk on the flannel board. Scatter letters written on leaves in the foreground. Let children choose a letter, name it andput it on the tree. 6. To check the child's ability to identify letters prepare a mimeographed sheet of letters in random sequence. Mix upper and lower case letters. Ask the child to circle the letter in each row that an aide or another child calls out. 7. Letter Man - (To tune of Muffin Man) Thegroup sings, "Do you know the letter man, the letter man, the letter man? Do you know the letter man, who lives on alphabet lane?" Give out letter cards, some upper and some lower case. One child skips around the circle with his card as the children sing. If his letter is a capital, he tries to find his partner with the matching small letter. He and his partner skip around the circle together. The partner then chooses a new letter man by calling out the name of another letter. 8. Matching letters - In order to evaluate the child's progress in the skill, exercises such as this may be used: ABSR arbt BOST asbr SRBT boat 9. Refer to Getting Ready to Read for additional activities with letters.	a. Teaching Resources Co. Letter Recognitionstrip Books b. Sesame Street - Waling Letters c. Flex-ed by Educational Innovations

BEHAVIORAL OBJECTIVE	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	10. Have child trace letters. sandpaper letters acetate letters (covered) felt letters letters made up of beans, rice letters made of broken lines. Have child trace the letters in his name. Strokes in the letters should be color coded. red - 1st stroke blue - 2nd stroke green - 3rd stroke 11. Simple rhymes and songs to emphasize the sequence of strokes. 12. Have child copy letters 13. Have child copy his name. 14. Have child make his letters without a visual pattern. 15. Have child write his name without a visual pattern. (These activities can be applied to numberal writing also.)	Writing Letters and Numbers Practice Pad by Stone Educational Publications. Patterns for Tracing the Letters of the Alphabet by Educators Publishing Service, Inc. Link letters by Milton Bradley
	G. Child can extend and reproduce a pattern using different materials.	
	When shown a construction made from a set of toys - (blocks, etc.) the child can reproduce the structure using a second set of materials.	
B. Child can recognize a drawing of a flat three-dimensional object ▭, (a square knockout from a template), and a drawing of a cube.	Place a flat 3D object on table and tell child to watch as you draw it on the board. Tell him that this is a picture of what he sees on the table.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	Place two flat 3D objects side by side on a table and tell child to watch as you draw them on the board. Tell him that this is a picture of what he sees on the table. Repeat 2 above placing flat objects end to end. Draw a pattern as in 2 or 3 above on the board and have child reproduce it on the table with the actual objects. (Be sure that child understands that his reproduction must be flat and not stacked up). Repeat the activities above increasing the numbers of objects and varying the position. (Do not stack at this time. Objects should be flat.) Teacher will hold up a cube in front of children, making sure that each child sees 3 sides at one time, (Name the top, this end, and one side.) Follow the sequence outlined in activities listed above. The following can be used as a learning center. a. When given a scale picture of a tile or block design, the child can reconstruct the pattern using blocks of the same color. b. Given a two dimensional drawing which is color coded, the child can reproduce the drawing by using the actual objects. 1. first using a drawing of one object.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	2. two objects  3. three objects  4. four objects 	
C. The child can reproduce a design with real objects. 1. An actual three dimensional design. 2. A drawn representation of a three dimensional design.	Begin with 2 cubes stacked. Have child reproduce it with 2 other cubes. Increase complexity of design as child's ability increases. Have child reproduce each design. Follow sequence outlined in activities above for drawn designs - work from color coded to not color coded.	

Tactile Perceptual Skills

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
A. The child can state whether an object is smooth or not smooth.	Give the child many objects which have smooth surfaces. Pick up one, have the child name it and feel it. Child will repeat after the teacher, "This _____ is smooth." Given a set of several objects that are not smooth, have the child name the object and feel it. Child will repeat after the teacher, "This is not smooth". Given an assortment of objects containing smooth and not smooth objects, the child can look at each object and tell whether it is smooth or not smooth.	
B. Child can state that objects which are not smooth are rough.	Same activities as in A above except use terms rough instead of not smooth.	
C. Child can state whether an object is soft or not soft.	Follow same procedure as outlined in A above.	
D. Child can state the objects which are not soft are hard.	Follow same procedure as outlined in B. above.	
E. Child can sort textured materials which are smooth or rough without visual clues.		
F. Child can sort textured materials which are soft or hard without visual clues.		
G. Blindfolded, the child can feel shape differences.	Given 1 of the following shapes: circle, square, rectangle, triangle, and a set of four from which to choose. The child can find an object which is the same shape as the one he has in his hand. Repeat activity above, but have child find a different shape.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
H. Blindfolded, the child can feel size differences.	Same as above, having the child find an object of the same size rather than shape. Same as above, but child finds object of different size.	
I. Blindfolded, the child can feel texture differences.	Give child a texture sample and a selection of three other textures from which to choose one like the sample. Repeat activity I above, but have child find one with different texture from the sample.	
J. Child can identify familiar objects by touch.	Mr. Feely Box or Touch Box. What's in the Bag game? Let child name objects as he walks blindfolded around the room.	Training in Some Pre-requisites for Beginning Reading by Beth Slingerland. p.77

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
A. The child can verbally describe using either the term sweet or sour, the taste of some foods.	Teacher will give the child a piece of candy and says, "This candy is sweet." Child repeats it. Teacher gives child a taste of lemon wedge and says, "This lemon is not sweet, it is sour." Child repeats it. Follow this pattern for other foods in the sweet-sour category, until child displays adequate knowledge of the sweet-sour concept. The child can verbally describe using either the term sweet or sour, the taste of: a. candy c. lemon d. sugar e. dill pickle	
B. The child can verbally describe using either the term hot or cold, an object which he touches.	Follow same type of teaching activities as outlined in A above. Use objects such as: ice warm water metal.	
C. Child can verbally describe an object as being smooth or rough	See Tactile Discrimination section.	
D. Child can verbally describe odors according to his own feeling in terms of "I like to smell it." or "I do not like to smell it."	Give child several things to smell: perfume, candy, onions, ammonia, flowers, and have him tell if he does or does not like to smell it.	

Classification Skills

BEHAVIORAL OBJECTIVE	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
A. Child can classify by resemblance.	Sorting boxes can be used along with any of these activities. Given a group of objects, the child can classify them on the basis of one of the following common elements. a. shape b. size c. color d. texture e. material the child needs to have experience in recognizing wood, glass, plastic, paper, and metal before he can classify. For a sequential development of resemblance skills, refer to the section on visual discrimination.	Training in Some Prerequisite for Beginning Reading by Beth Slingerland p. 23, 24, 25, 26
B. The child can classify objects by functional use.	Given a group of objects, the child can classify them on the basis of their use. a. things we wear (clothes) b. things we eat (food) c. things that transport us (vehicles) d. things that cut e. things that we use to fix or build things (tools) f. things to sit on. Can use objects, pictures or children can cut own pictures from magazines.	
C. Child can put objects into one class based upon multiple criteria.	1. shape - color 2. shape - texture 3. color - texture 4. shape - material 5. shape - size 6. color - size 7. shape - number 8. color - number	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
D. Child can form general categories from specific objects, (such as pears, apples, cherries, are all fruits.)	Given a folder containing many pictures of items, the child is asked to group them according to common characteristics and then to give general names to each group, (clothes, food, etc.	SRA Inquisitive Games
E. Child can break general categories into specific items.	Give the child the general category and have him find picture to fit the category and paste them into a piece of paper.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
A. The child can repeat, perform or tell about something presented visually.	Child is shown an object for a very short length of time, he is then asked to pick out a matching object from an arrangement consisting of only one object which is the same as the original.	Training in Some Pre-requisite for Beginning Reading. by Beth Slingerland p.64
	Child is shown an object for a very short length of time, he is then asked to tell what he saw. Child can repeat a 2 using pictures on a filmstrip which are flashed on the screen. Teacher will flash a simple shape on a screen. a. Child circles what he saw on a worksheet which includes distractors. b. He then traces the shape on the same worksheet. c. He makes the shape in the air. d. He then makes it on paper. Game - Memory - The child is shown two objects. While he isn't looking one is removed. He states which object is removed. The child can repeat A 5 using three, then four, then five objects. The child reproduces from memory, one, and two dimensional designs after he has viewed a model. After viewing an object or picture, the child can recall details about it.	
B. Child can repeat or tell what he has heard.	The child can repeat a sound pattern of one, then two claps, three claps, four claps, etc. Tempo and rhythm can be varied as child progresses.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	Child can repeat a sequence of words or numbers. Begin with one word or number and build as child is capable of repeating. Child can repeat a sentence accurately. Child can carry out a sequence of directions. Ways to help children increase memory span. a. Given a number of objects to remember, the child groups them into categories, then recalls members of each category in sequence. b. Given an object to remember, child names it and uses the name as an aid in recall. c. Child can construct or learn an easily remembered device to aid in recall. d. Backward chaining. If a verbal or other sequence is to be remembered with order, learn the last two or three items first, then the next to last plus the last, etc. until the entire sequence has been memorized. e. Using rhythm and other aids, recite material with a fixed rhythmic pattern, or set it to a tune to increase the number of "cues" for recall. f. Grouping for efficient memorization: Identify items most likely to be confused with one another and pay extra attention to those subsets in memorizing.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
A The child can verbally communicate pertinent, personal information: 1. Name 2. Brother's and Sister's names 3. Mother's and father's names 4. Address 5. Phone Number 6. Birth date	GAme - Mr. Policeman I am Lost Pretend that child is lost and another child (policeman) find's him. In order to get home lost child must tell name, address, phone number, and parent's name to policeman. Have birthday party for whole class. Giving children plenty of advance notice tell them that they must have have a ticket to get in. The way they get ticket is to tell teacher their month and day of birth. Have phone # club. On board have a large cut out of a phone. In order to get in club, child must tell his phone number. If correct, his name and # are put on large phone and he is given a phone badge to wear to show that he is a member.	
B. The child can express himself in one word answers and simple phrases.	Make the child name each object in a group of assorted objects. Have the child tell the use of given objects. Ex. Knife, Shirt, Chair. Have the child tell or describe the objects in terms of physical characteristics. Have child state the location of an object in the room. (Do not accept a pointing response or a response such as "Over there".	Distar Language Kit I. SRA

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	Have child state the relationship of living things. (mother, father, sister, brother, etc.)	
C. The child can ask for an respond to requests in complete sentences. 1. The child can use verbs and their tenses properly. 2. He can use pronouns properly.	This objective can not possibly be taught through any one activity. It is a skill which most students acquire as a result of constantly learning correct sentencing and grammar. It should be a goal that is strived for from the beginning of the year.	Training in Some Pre-requisites for beginning reading by Beth H. Slingerland Language Lette by Gotkin Distar Language I. SRA
D. The child can give and follow directions. 1. Simple one-step directions 2. Complicated directions containing more than one part.	Whisper directions and have child carry them out. Have other children guess what he is doing. Have child give directions on care of pets, how to play simple games, how to make things, etc. Game - You Must Variation of Simon Says, only use, "You must".	
E. The child can express and describe his emotions and the emotions of others. 1. surprise 2. anger 3. happiness 4. sadness 5. fright 6. tiredness 7. thought	Game - How would you feel it - Describe situations to the child to which he can give his feelings. Use Emotion Pictures Have one child depict an emotion and another child tells how the first child feels. Have the child describe his feelings as he listens to fast music and then to slow music.	Moods and Emotions Pictures

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
F. The child can discuss past and present events and plan for future events using time relation terms such as; days of week, months of year, seasonal activities, yesterday, today, tomorrow, before, after, awhile ago, during, until.	See development of time concepts in math section. See yellow section of Carroll County Kindergarten Curriculum guide Collect children's paper work and file to be used later to reinforce meaning of yesterday, last month, etc. Much use of these words by the teacher will help the child understand their meaning. Use calendar and emphasize these terms.	Calendar Daily calendar sentences
G. The child can comprehend an oral story by answering, questions asked about it.	The child can tell what part of the story he liked best or draw the part he liked best. Tell who his favorite character is. Read a story to the child and have him make up his own ending. Given a series of no more than 5 pictures, the child can put them in the order that they happened in the story. Have the child retell the story, making sure he has proper sequence. Child can pick out proper costumes and preps for the story characters. The child can act out the story. The child can pick the best appropriate title from a series of 3 given titles, or	he can suggest a title himself.

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
H. The child can sequence a story in the correct order by telling the story and by putting pictures in correct order.		Sequential Picture Cards I, II, III, IV, by developmental Learning Materials.
I. The child can make up his own story.		
J. The child can anticipate an outcome to a given situation.	Predicts the outcome of unsafe practices a. use of knife. b. play with matches. Child can complete a logical relationship in an if-then statement: If it is raining, then _____ If you go out without your coat in winter, then, _____.	Training in Some Pre-Requisites for Beginning Reading by Beth H. Slingerland, p.34-35

Location of Material and Information

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
A. Given a task the child can name the materials he will need to perform it.	Ask the child to paint a picture of his own choosing, before starting his picture have him tell you what he needs to use to do it.	
B. Child can locate the material that he will need to perform a given task.	Have him get the materials that he has indicated above.	
C. Child can put away his materials in the correct location.		
D. Child can estimate the amount of material he will need to perform a given task.	Make sure the child is aware that if he is only going to paint one picture, he only needs one piece of paper.	
E. Child can tell the source of needed materials.	Have the child tell where he can locate a picture that he can cut out. Ex. magazine. Have him tell where he can find toys - story store, toy box, etc. Have him tell where he can get art materials	

BEHAVIORAL OBJECTIVE	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
A. The child can locate and describe objects in positional terms: 1. near 2. far 3. above 4. below 5. under 6. left 7. right 8. next to 9. beside of 10. in front of 11. behind 12. on top of 13. close to 14. middle 15. bottom 16. backwards 17. forwards 18. sideways	Each term should be taught separately. It is best to place the child in the actual position indicated by the term. From there, one should move to concrete objects, followed by pictures. Game - Simon Says a. when told, the child can put hit limbs or his entire body in the position described by Simon. b. when told, the child can touch objects in relation to himself. c. He can name the position indicated by two concrete objects or two objects in a picture. For example, draw a picture of a banana over a ball, this material can be drawn on a large size language master card. Have a pre-recorded statement. "The banana is over the ball." First, have the child record his own sentence and then have him play yours to see if he is correct. d. The child can place or throw a ball to a verbally described position. e. Have the child find an object which the leader has verbally described in terms of positional relationships to other objects. Ex. Leader - "The thing I'm thinking about is under the chalk ledge." f. Have the child go on a treasure hunt to find a location in the classroom when it is verbally described.	Training in Some Pre-requisite for Beginning Readers by Beth H. Slingerland p.84 Left-right Discrimination Program by Facilitation House

BEHAVIORAL OBJECTIVE	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	Have the child verbally describe the location of an object using positional terms. Game- Looby-Loo Song for left, right, discrimination, etc. Should a child have trouble, put a weight bracelet on the wrist you are talking about. Song - Put Your Hands Up In The Air	weight bracelets from Developmental Learning Materials Record - Learning Basic Skills Through Music by Hap Palmer.
B. The child can follow and describe locational directions.	Take a Safari Trip - With the teacher describing 2 locational points, the child can pass designated places in designated order. Repeat above with 3 locational points. Repeat above with 4 locational points. Memory Game Have one child walk around room touching not more than 4 things on his way. The second child must then describe the first child's route in sequence.	
C. The child can follow a map of the classroom to get to a designated point or location. (Map should be drawn with the child present so that it can be verbally described to him as it is constructed.	Game - Treasure Hunt using the map that you have just made with the child, indicate a hidden object in the room by an X. Using the map, have the child look at the map and find the spot marked with an X in the room. Using the same map, mark a path that the child must follow to get to the designated spot	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	Have the child mark his own path to the designated spot and have him follow it in the actual classroom. Hand the child a new map of the room, clearly and precisely marked, which has not been drawn in front of the child. Repeat exercies b and d above for a new location.	
D. The child can estimate how much room will be needed to put his body in a given space.	Have 2 chairs back to back with a slight space between them and have the child tell if he can get through or not. Then have him try to get through to see if he is correct. Use the above activity in different situations.	
E. The child can conserve object size even though the distance between the observer and the object changes.	Have 2 identical objects,- one placed close to the child and one placed far away. Ask the child which is biggest which is smallest. Bring the far object up to the object that is near. Through questioning establish with the child that the objects are really the same size but the distance is what made the far object seem smaller than the close object.	
F. Given views of objects from various orientations - (front, back, side, top, bottom, various angles and distances, etc.) the child can identify which are the same objects and which are different.		Use the Early Childhood Curriculum - A Piaget Program by Celia Lavatelli, for perspective activities.

Critical Thinking And
Problem Solving Skills

BEHAVIORAL OBJECTIVE	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
A. The child can solve problems (find a hidden object), through a systematic search. 1. The child can find a missing object by using given clues: (1) size (2) shape (3) color (4) texture	Game - Hot Butter Beans come to Supper. Game - Scavenger Hunt Describe missing object in terms of clues given in A objective.	
2. Child can guess or find an object in an assortment. (1) question to narrow the possibilities. (2) using "hints" from a leader.	Game - 20 Questions Game - What's In the Bag Game - Variation of 7 up. Child are allowed to ask questions about the person who tapped them. Game - One child covers the eyes of another child. The blindfolded child must guess who has blindfolded him.	
3. The child can search for a hidden object without given clues.	The child can search an entire area systematically by keeping track of areas already searched, by scanning over areas areas where he knows object could not possibly be. Game - Treasure Hunt	
B. The child can solve problems by gathering information, forming an hypothesis and testing to verify his hypothesis.		

Critical Thinking And
Problem Solving Skills

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
1. The child can gather need information. a. He can form questions to ask someone relevant to a particular problem. b. He can ask the appropriate people. c. He can reject irrelevant information.	Game - 20 Questions Create situational problems for which the child must find a solution. e.g. select children in classroom to play roles of Community Helpers. Simples costumes may be provided. Pick 1 child and tell him that he is lost. Ask, "Which person would you go to and what would you ask them." Show child a picture and tell him 3 sentences about it. Two sentences are pertinent and one is irrelevant. He must tell you the irrelevant sentence. Set up a situation and say, "I've got a problem: My baby won't stop crying. What should I do?" Have children offer solutions to the problem, rejecting those that are not feasible, or practical.	
2. The child can hypothesize and predict outcomes.	Use If-Then statements with the child. Put a conglomeration of sand, metal, large beans rice into a box and mix together. Also set in front of the child, smaller boxes, a sifter and a magnet. Children are to separate the mixture into its component parts and put them in the boxes. Give children problems and have them formulate hypothesis for solving. Activities such as, "I don't want to walk very much, what's the shortest way I can get from _____ to _____.	

BEHAVIORAL OBJECTS	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
3. The child can test to verify predicted outcomes.	Have the child test outcomes for activities listed above.	
4. The child can distinguish between fact and fantasy.	Give the child picture of real and imaginary animals, people, things. Talk about the pictures and ask child which ones he would really see and which ones are make-believe. Use sentence illustrations: "The cow jumped over the moon." "The cow looked at the moon." "The astronauts walked on the moon." Ask child to tell which sentences are real and which sentences is fantasy or make believe. What makes it so?	
5. Child can distinguish between fact and opinion.	Make children aware of the difference between fact and an opinion, e.g.: It is cloudy today. I think it will rain. Do you think so too? Point out that what you think is not necessarily true. In discussing commercials, slogans, etc. ask children to decide if they agree with what they hear and see, and what parts are true.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
A. The child can identify the source of sounds in his environment. 1. Upon hearing a familiar sound from his environment, the child can state the source of the sounds by identifying the object used to produce the sound.	Listen to records and tapes and identify familiar sounds, such as: a dog's bark train's whistle, duck's quack, fog horn, vacuum cleaner, hammering, etc. Take a listening walk and identify as many sounds as possible. Screen a table on which there are objects which make sounds. As they are sounded, children identify them, Use such objects as ball, horn, triangle, clock, shaker, etc. (Note: If child cannot identify sound, teacher will have to show him object which makes sound, and repeat A 3 above. Have children close their eyes, one child speaks, the others try to guess who speaks, the others try to guess who spoke by recognizing his voice. Using one large wooden block as a drum, have the children watch as you strike a large block of wood against it. Have the child watch as you hit a pencil against it. Have them tell if the sounds are the same or different. Now blindfold the child and repeat, having the child tell which object you used to make the sound.	A1. Sounds I Can Hear - records & cards. Peabody Language Kit Level Records, Muffin in the City Muffin in the Country. Teaching Resources A.D.D. progra Auditory Perception by Cakland & Williams.
2. Child can determine the location of a sound.	Upon hearing a sound, the child can point to the part of the room from which the sound came.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
3. The child can discriminate sounds of objects as being the same or different.	Blindfold the child and make two sounds. Sometimes the sound will be the same, sometimes different. The child will have to tell if they are the same or if they are different. Include sounds from musical instruments. Make containers, two of which contain the same materials and one of which contains different material. Child will shake containers and find the two which make the same sound. Tell the children that they are going to play a game in which they have to listen very carefully. The object of the game is to indicate whether two sounds are alike or different. If the two sounds are alike they are not to raise their hands. If the two sounds are different, they will raise their hands. After the teacher demonstrates the game, the children put on their blindfolds. After hearing each pair of sounds the children respond by either raising or not raising their hands. The teacher should then tell the children whether the sounds were alike or different.	
B. The child can reproduce rhythmic patterns. a. The child can determine how many times he hears a sound.	Blindfolded, have the child listen as the teacher claps hands. Have child tell how many times teacher clapped. Blindfolded, have the child listen while you beat or drum, bounce a ball, etc. Have the child tell how many times he heard the sound.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
2. The can can reproduce a very simple, non-verbal sound.	Blindfolded, the child listens as you clap your hands once. Have him repeat. (if trouble occurs, break the task down. Have the child tell what he hears, what made the sound, and how many times he heard it. Then repeat B1 above. If trouble still occurs, it may be necessary to hold the child's hands and move them through the task and possibly provide an auditory description as you move him.) Increase number of claps keeping the rhythm constant and have the child repeat. Repeat B1 and B2 using various rhythm instruments.	
3. Given a rhythmic pattern, the child can tell whether it is fast or slow.	The teacher claps hands fast, keeping rhythm constant and says, "I am clapping fast." The teacher claps hands slowly, keeping rhythm constant and says, "I am clapping slow." The teacher claps either fast or slow and has the child tell which it is. Repeat C2, blindfolding child. Constantly clapping, alternating fast and slow, have the child name the type of movement as it is performed.	
4. Child can reproduce simple rhythmic patterns.	Blindfolded, child will listen as the teacher claps out a very simple rhythmic pattern. clap -- pause -- clap, clap, (If trouble occurs, refer to task analysis in B1 above	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
5. The child can keep time to music.	Have the child march to a marching song (4/4time)following a leader. Have the child clap to a marching song following a leader. Have a child march and clap to marching song following a leader. Repeat these activities without a leader.	Our First Rhythm Band by Stanley Bowmar Co.
6. The child can reproduce more complex rhythmic patterns.	Use fast and slow patterns and gradually increase the number of pauses and claps.	
7. The child can discriminate rhythmic patterns as being the same or different.	The teacher will beat out a set of two patterns (sticks, hands, drum) and the child is to tell if it is the same or different. Repeat several times.	
C. The child can discriminate volume, pitch, distance, and duration of a sound. 1. The child can discriminate loud and soft sounds.	Using a record player, turn it up and say, "This is Loud" Turn it down and say, "This is soft." Turn it up and down and ask the child if it is loud or soft. Repeat A1 using various rhythm instructments. Teacher will produce a loud sound. Child will state that it is loud. Teacher will produce a soft sound. Child will state that it is soft. Teacher will produce loud and soft sounds together and child will tell when a sound is loud and when it is soft.	

BEHAVIORAL OBJECTIVE	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	Play a note softly on the xylophone; then play that same note loudly. Ask the children to indicate whether the two notes differ and how they differ. Then tell the children that you will play one note, and after a short pause you will play the same note. Tell them that the second note will be either louder or softer than the first note. They are to listen carefully so that they will be able to tell you whether the second note was louder or softer than the first note. Play the game above. Ask the children to form a line facing you. Each time the second note is louder than the first they may all take one step forward. When the second note is softer than the first, they stay in the same place. Those who move forward on a softer note are penalized by taking two steps backward. Those children reading the front of the room first are the winners.	
2. The child will tell whether a sound is near or far.	Beat on a drum while you are standing beside the child who is watching. Say, "Are you near the sound?" Is the sound hard to hear or easy to hear?" Teacher moves far away and beats on the drum with the same force. Say, "Are you near or far away from the sound? Is the sound hard to hear or easy to hear?" Repeat B1, blindfolding the child.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	Repeat first activity under 2. using various sound makers including voices; make sound in different parts of the room, having the child tell if it is near or far. Repeat at various distances.	
3. Child can discriminate high and low pitches.	Give the child many examples of high and low sounds and have child identify sounds as being high or low. Have the children put on their blindfolds. Play one note at a time on the xylophone and have the children respond by standing high or low as the sounds suggest. The children are told that they are to play a game in which they must listen very carefully. The object of the game is to indicate whether two sounds they hear are the same same or different. If the two notes are different, they are to raise their hands. The purpose of this activity will be to provided a pattern of loud and soft notes which the children should remember; they should be able to identify the same pattern when they hear it again. For example; play do (softly - do (softly) pause two or three seconds, and play do (softly)-- do(loudly). The children should learn to recognize that these two patterns are different. Continue playing patterns of two notes until the children are able to distinguish between patterns which are the same or different. The following are suggestions which the teacher may use for different patterns. He should intersperse patterns which are the same among these.	Xylophone, blindfolds Frequency tape and blindfolds. piano, or xylophone. Xylophone

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	do (soft) do(soft) pause do (soft) do (loud) do (soft) do(loud) pause do (loud) do (soft) do (loud) do(loud) pause do (loud) do (loud) do (loud) do(loud) pause do (loud) do (soft) do (loud) do(soft) pause do (loud) do (soft) do (soft) do(loud) pause do (soft) do (loud) do (soft) do(loud) pause do (soft) do (soft) do (loud) do(soft) pause do (soft) do (soft)	
4. The child can discriminate the duration of sounds.	Draw a six-inch and a 24-inch line on the board. Tell the children which line is short and which is long. Draw two more sets of lines on the board and have the children identify the short and long lines. Then have several children to the board and draw a short and a long line. Finally, have them look for two things in the room, one of which is longer than the other.. (The teacher may want to select one object and ask the children to point out other objects which are longer and/or shorter than the teacher's object). Next hum a long note while drawing a long line on the board. Follow the same procedure while drawing a short note. The children should indicate whether the notes are long or short. When you think the children can identify long and short notes without visual clues, discontinue drawing lines. Continue by humming one note and asking the students to hum a longer or shorter note. Make two sounds on a buzzer board, Have the child tell which one was longer. Have him tell which was shorter	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
D. The can D. The child can hear differences in words. 1. The child can discriminate gross differences in words.	Tell the child that you are going to say several words and that he is to clap when he hears one which is different. Teaching examples: foot foot foot shoe keep keep keep keep Words for this activity: plate plate plate dish dirt dirt dirt earth growl growl growl roar play play play play sky sky clouds sky chair chair chair couch chair race race race run race Next the children are to listen for the word that is different and do what it says. Be sure they listen to all the words in each group before they perform the action. Teaching examples: sing sing laugh sing cry cry scratch cry Words for this activity go go stand go go hop hard hard hard hard please please please clap please run rug rug rug stamp snort click click click click melt melt smile melt melt Tell the children to listen carefully so that they will know whether the pairs of words you are going to read to them are exactly alike or different. Tell them to nod if the words are alike and to wiggle their noses if the words are different.	Training in Some Pre-requisites for Beginning Reading by Beth H. Slingerland p.50

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	contd. Teaching examples tap tap hit ball Words for this activity: dog man run name buy ice toy toy barn arm fun fun teach teach rich rich	
2. The child can make find discrimination in words.	The object of this game it to discriminate between pairs of words which, in most instances, differ in sound by only one phoneme. The game will be played similarly to Moth May I? The teacher will say 2 words. If they are the same, the child tells the teacher that they are the same and moves a stated number of steps toward a goal. If the child misses, he must go back a stated number of steps The first few words in the list may be used as teaching examples. The child should not see the teacher's mouth. cup cub wet web must must bath bathe bird berg threw shrew sheet sheep pan pin tie tie cat cut lamb limb spot stop tab tag cuff cuff hit tick pan can Bob Dodd came calm with wish etc.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY

Using the same type of game format as outlined in B1, use a series of words each time. The child listen for the one word in series which is different from the others, and then pantomines that word.

bat	bat	bat	sat	
nap	nap	cap	nap	
lie	lie	lie	cry	
speak	seek	seek	seek	
dance	prance	prance	prance	
walk	talk	walk	walk	walk
creep	creep	weep	creep	
bump	bump	bump	jump	
peep	sweep	peep	peep	
bake	bake	rake	bake	
wiggle	giggle	wiggle	wiggle	
pour	pour	pour	snore	

Repat B2 using words which differ in medial sound.

sit	set	set	set
bit	bet	bet	bet
cup	cup	cap	cup

Repeat B2 using words which differ in their ending sound.

hap	hap	hap	have
bite	bike	bike	bike
bed	bet	bed	bed
lark	lark	lark	lard

Repeat the story Bendamolina to the children. Tell them that it is about a little girl named Bendamolina who liked to wear a pot on her head. "Sometimes she got her directions all mixed up because she couldn't hear very well with the pot on her head.

BEHAVIORAL OBJECTIVE	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	contd. After you finish the story, play a listening for directions game. Give each child in turn an opportunity to pantomime one series of directions described below. If one child misses, give the next child the same directions. Directions: 1. Show me your shoe, then shake your head. 2. Bounce a ball; then balance a bowl on your knees. 3. Put on a cap, then bat a big ball, then clap. 4. Wink one eye; then wind your watch, then blink. 5. Touch your toes; then tap the top of your head. 6. Hop to the door; then stop, then stomp on the floor; then put your hands on the door. Review the story of Bendamolina. Let the children tell as much as they can remember and then you add any important incidents which they left out. Tell the children to listen carefully to a series of directions which follow and act out the directions which make sense to them. Directions: 1. Hump on the more. Thump on the story. Jump on the floor. 2. Bake your shed. Shake your head. Rake your bed. 3. Blink your eyes. Yink moor skies. Wink your byes. 4. Rip around the skoom. Skip around the boon. Skip around the room. 5. Cho bit on a stair. Do kit on a bear. Go sit on a chair. 6. Walk on the backsord. Wawk on the wakesord. Knock on the blackboard.	

INSTRUCTIONAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
E. The child can discriminate and produce individual letter sounds without concern for the letters which they represent. 1. The child can produce and discriminate the speech sound for **M**.	The teacher will say, "Listen to what I say. **Mmm** is a sound. We hear the **Mmm** sound when we say words like mother, man, mouse, monkey. Look at my lips when I say **Mmm**. My lips are together, aren't they? You say **Mmm**. Now try to say **Mmm** with your mouth open. You can't do it, can you? That's because there is a special way to make the **Mmm** sound. Let's use our **Mmm** sound and hum a little tune." Show the children how to hum a simple familiar tune. "Now you say these words after me and feel the **Mmm** sound: mother, man, mouse, monkey." As you say these words, sustain and accentuate the **Mmm** slightly to aid discrimination. "can you think of some words that begin with **Mmm**?" Give the children time to respond. "Listen to this sentence (say it slowly)"Mother is making mince pie. Did you hear any **Mmm** sounds. Listen again". Repeat the sentence and ask the child to tell you which words said **Mmm**. Use these and other sentences in the same way: I met a mouse from Maine. May I move the mat? A monkey sat in the middle of the marble. Oh my! Look at the mud! On the next day review the **Mmm** sound. Give the children other sounds along with the **Mmm** sound and have them raise their hands when they hear **Mmm**.	A Little Storehouse Readiness Program by Stone, Educational Publications A.D.D. Program by Teaching Resources Ideal Consonant Charts A Multisensory Approach to Reading by B. H. Slingerland Reading 360 Level 1 Learning About Sounds & Letters by Ginn Voice Reflector for Aural self-monitoring by Tok-Back, Inc. We Discover Sound (P) by Random House Beginning to Read, Write, and Listen, Kits I & II by J. B. Lippincott Co. Consonant Pictures for Peg Bd. by Beckley Cardy Co.

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
2. The child can produce and discriminate the speech for n. 3. The child can discriminate between the m and n sounds. 4. The child can discriminate the speech sound for r. 5. The child can discriminate the speech sound for l. 6. The child can discriminate the speech sound for m, n, r, and l. 7. The child can discriminate the speech sound for p. 8. The child can produce and discriminate the speech sound for k(the hard c as in cat). 9. The child can discriminate between the sounds for p and k in the initial position of words. 10. The child can discriminate between the sounds for p and k in the final position in words. 11. The child can produce and discriminate the speech sound for t, and discriminate the position of t within a word.	For this an all other letters, follow the sequence outlined in A. Should a question arise about the method of presentation, refer to the book listed under materials.	Auditory Perception and Diagnosis Development for Language and Reading Abilities by Thomas Oakland Fern C. Williams Published by Special Child Publications, Inc.

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
12. The child can discriminate the speech sound for h.		
13. The child can produce and discriminate the speech sound for h.		
14. The child can discriminate the t, h, k, and p speech sounds.		
15. The child can produce and discriminate the speech sound for b.		
16. The child can discriminate and match the sounds presented in previous objectives, in initial positions. (m, n, r, l, p, k, t, h)		
17. The child can discriminate and match the sounds presented in previous objectives in final positions. (m, n, r, l, p, k, t)		
18. The child can discriminate between words which begin with the speech sounds t, p, b, k.		
19. The child can produce and discriminate the sound for f.		
20. The child can produce and discriminate the speech sound for s.		
21. The child can discriminate between the s and f speech sounds.		
22. The child can discriminate between the f and k speech sounds.		

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
23. The child can discriminate between the s and t speech sounds.		
24. The child can discriminate the speech sound for the voiceless th.		
25. The child can discriminate between the sounds for f, th, and t.		
26. The child can produce and discriminate the speech sound for d.		
27. The child can identify the d sound at the end of words.		
28. The child can produce and discriminate the sound for g.		
29. The child can discriminate between the speech sounds for d, g, k, and t in the final positions in words.		
30. The child can discriminate and match speech sounds in the initial position.		
31. The child can discriminate and match beginning speech sounds in words.		
32. The child can discriminate the speech sound for sh.		
33. The child can discriminate between the sh and s sounds.		
34. The child can discriminate between the th and sh sounds.		

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
35. The child can produce and discriminate the speech sound for ch.		
36. The child can discriminate between the sh and ch speech sounds.		
37. The child can discriminate between the sounds for k and ch.		
38. The child can discriminate between the sp and st blends.		
39. The child can discriminate between the sounds for s and ch.		
40. The child can identify the short vowel sounds in the medial position in words, by repeating the words back to you.		
41. The child can discriminate the sound of the short vowel a in the medial position.		
42. The child can discriminate the sound of the short vowel e.		
43. The child can discriminate the sound of the short vowel o.		
44. The child can discriminate the sound of the short vowel u.		
45. The child can discriminate the sound of the short vowel i.		
46. The child can discriminate the short vowel sounds in words.		

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
A. The child can identify and work with geometric figures. 1. The child can identify a line segment as being either straight or curved.	The teacher draws straight line segments of various lengths on the board and says, "These are line segments." The teacher has children drew a line segment in the air. The teacher has various children come up and draw line segments on the board. Have the children repeat after the teacher. "This is a line segment." Teacher uses yard stick to make a straight line segment. She says, "This line segment is straight." Have the children repeat after the teacher. Repeat A1-A4 using curved line segments and substituting the word curved for straight. Have line segments, curved and straight, on the board or on a chart. Ask the child to point to curved line segments and straight line segments.	
2. The child can identify a geometric figure as either being open or closed.	Teacher draws a closed figure on the board. She puts a picture on an animal inside figure and says, "Can the ____get out?" "The _____can't get out because the cage is closed." She puts picture of an animal on the outside of figure and says, "Can the _____get into the cage? The ____can't get into the cage because it is closed."	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	The teacher then says, "When we have a figure and an animal can't get in or out of the figure, it is called a closed figure. Repeat above using an open figure.	Invicta Attribute blocks
3. The child can identify and name all the basic shapes. circle square triangle rectangle	see visual discrimination section.	Template Knockouts
4. The child can seriate shapes according to height or length.	(Note: If child has difficulty with long and short, refer to the section on auditory discrimination.) (Note: If child has difficulty with short or tall, refer to measurement skills). Given a basic shape and other rectanglar shapes, each varying in length only, the child can seriate the shapes from short to long. Given a basic square shape and other rectangular shapes, each varying in height only, the child can seriate the shapes from shortest to tallest. Use building tower blocks.	Use building tower blocks from Fisher-Price
5. The child can conserve volume.	Give the child two containers, a wide one and a narrow one of the same height. Have available different pouring materials (e.g. rice, water, etc.) Have child decide if wide container holds as much as narrow container.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	Same procedure as in IIA except using two containers, a short one and a tall one of the same width. Same procedure as in IIA except using a short wide container and a narrow tall container, both containing a quart or a pint.	
C. The child can divide an object or a set of objects into halves.	The teacher will have available concrete objects that she can cut into halves. (candy, apple, pear, etc.) Teacher cuts object in half. Gives halves to two children. She discusses how much each child has and the concept of one-half. Have children cut objects into halves.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
A. The child can make comparisons of weight, width, length, height, duration, and hue intensity. 1. The child can compare objects by length.	Note: to teach long and short refer to auditory discrimination section. Give the child 2 sticks, have him hold them up together to see if they are of equal length. Give the child 2 sticks, have the child hold them together to see which is the long one, the short one. Give 2 lines which the child must compare for length and which he cannot superimpose, the child finds a rod exactly equal in length to one of the lines, then compare the rod with the second line. Give the child 2 lines which he must compare for length and which he cannot superimpose, the child can compare length by using flexible measuring material such as ribbon or string. Give the child 2 lines which he must compare for length and which he cannot superimpose, the child finds a rod longer than line A, makes a mark on the rod to indicate the length of A, then used the marked rod for comparison with line B. Give the child 2 lines which the child must compare for length and which he cannot superimpose, the child uses rod considerably shorter than line and steps it along, counting the # of steps he makes. Then he steps the same rod along line B, comparing the # of steps.	Cuisenaire rods Inquisitive Games. Exploring Number and Space by Sprigle SRA Stern: Kindergarten Kit by Houghton Mifflin

BEHAVIORAL OBJECTIVE	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
2. The child can compare objects by width.	B1. The teacher will have available several sets of two objects which are identical in all aspects except width. (ribbon, boards, etc.) Teacher will hold up wide object and sy "This _____ is wide." She will pick up the narrow object and say "This _____is not wide." (same set) Continue this procedure for all sets. Ask child to find all the wide objects in each set, and tell teacher how they are alike. Ask the child to find all the objects which are not wide and tell how they are alike.	Stern: Kindergarten Kit by Houghton Mifflin
	B2. Repeat 1 above introducing the term narrow in place of not wide.	
	B3. Give the child practice in sorting objects which are wide and narrow and labeling them as such.	
3. The child can make comparisons by weight.	C1. Activities will follow those outlined in B above.	Stackable Plastic Weights & Simple Scales by Dick Blick
4. The child can make comparisons by height.	D1. Activities will follow those outlined in B above.	
5. The child can make comparisons by duration.	E1. Refer to Aud. Discrimination section.	
6. The child can make comparisons by hue intensity.	F1 Activities will follow those outlined in B above.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
B. Given 3 objects, the child can find middle size.		
1. Given 3 objects which are identical, in all aspects, except height, the child can pick out the tallest, the shortest, and the middle-sized.	A1. Give the child 3 objects, Have him find the tallest. Have him find the shortest. Teacher says, "Look at the one which is left. This _____ is not the tallest. This _____ is not the shortest. It is middle-sized. Repeat for other sets of objects. A2. Give the child a set of 3 objects and have him find the middle-sized one. A3. Read the story of the "Three Bears" and discuss in terms of tallest, shortest, and middle-sized.	
2. Given 3 objects which are identical in all aspects, except weight, the child can pick out the heaviest, the lightest, and the middle-sized.	B. Follow procedure as outlined in A above.	
3. Given 3 objects which are identical in all aspects except width, the child can pick out the widest, the narrowest, and the middle size.	C. Follow the procedures as outlined in A	
4. Given 3 objects which are identical in all aspects except length the child can pick out the longest the shortest, and the middle size.	D. Follow same procedure as outlined in A.	
5. Given 3 objects, identical except in hue intensity, the child can	E. Follow same procedure as in A.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
5.(cont.d) pick out the darkest, the lightest, and the middle shade.		

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
A. The child can compare sets. 1. The child can use 1 to 1 correspondence to make compari-	Throughout the quantitative action, always refer to groups of objects as sets of objects. Given sets of objects that go together, (cups and saucers, shovels and pails, napkins and children, children and chairs), the child will put one member of the set with its corresponding member, until all all have been matched. Ex. Cups and saucers. Child is given all the cups in a single group and all the sauces in another group. For every cup, he is to find a saucer. Make sure that the child understands that every cup has a saucer to go with it and therefore the sets are equal in number.	
2. The child can use 1 to 1 correspondence to compare sets of eunequal number.	Repeat A1 above using sets that are unequal in number. After the child has paired the set, have him tell or point to the set that has more, and the set that has less.	
3. The child can identify the empty set as a set having no members.	Have the child find all the paste jars in the room and bring them to you. Teacher says, "This is a set of paste jars." Repeat several sets of objects. Have the child find something which you know is not in the room. When he has learned that there aren't any members, tell him that the set is empty because there is not anything to put in it.	

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
	Give the child 2 boxes - one which contains a set of objects and one which is empty. Have the child find the box that has the empty set.	
B. The child can count. 1. The child can count to ten by rote.	Provide the child with many counting situations in which the teacher serves as a model. Songs and Games - Ten Little Indians; This Old Man; Five in a Bed; One, Two, Buckle My Shoe.	
2. The child can count objects in a set	Teacher will serve as a model as she counts sets of objects (starting with one object in a set) and exaggerating as she points to each object as she counts it. Making sure that the child understands that he is to point to each object as he counts it - have the child count several sets of objects.	Jumbo Counting frame by Ideal Large Place Value Sticks Plastic Counters by Dick Blick
3. The child can use ordinal numbers in counting.	Many practical experiences should be provided for the child to use ordinal numbers in counting. Ex. - position in line order of doing activities. calendar - each day read the numderals for days that have passed in the month, in ordinal terms.	Stern: Kindergarten Kit by Houghton Mifflin.
C. The child can read and write numberals up to ten.		Distar Arithmetic I SRA Self-Correcting Learning # by Novo Educational Toy & Equip.

BEHAVIORAL OBJECTIVES	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
		Elementary Mathematics: Concept, properties, and operation by Spitzer. McGraw Hill Inc.
1. The child can read numerals 1-10	Each numberal should be introduced individually, following this procedure. Give the child set of one object, have him count it. Tell the child that we have a way of writing 1's name and to watch as you make it. Provide several opportunities for the child to find sets that correspond with the numeral that you give him. As more numerals are introduced, the child can match numerals to sets, or sets to numerals. As you are working with numerals be sure to constantly review and reinforce what has already been taught.	Ideal thermometer, Teddy bear counters. by Bradley Pegboard
2. The child can write numberals 1-10	Refer to Visual Discrimination (letter recognition)section.	Flannel Numberals
3. The child can order sets and numerals 1-10.	Introduce the concept of the # line. Find missing # and # line; as ability increases, remove more numbers. Have the child fill in all of the # on a number line. Give the child sets of objects containing various #'s from 1-10. Have him place it in the correct order.	Walk-on line
D. The child can add and substract intuitively.		

Quantitative Skills

BEHAVIORAL OBJECTIVE	DEVELOPMENTAL ACTIVITIES	MATERIALS AND/OR COMPANY
1. The child can combine sets.	Have 2 sets available. Have the child count how many are in each set, then put the two sets together and tell how many are in the new set. Use a number line.	 Walk on # line.
2. Given one set, the child can take away parts of the set and tell how many are remaining.	Have one set available. Have the child count how many are in the set. Then take some away and have the child count what is remaining in the set.	Flannelboard.